VEGETATION CLASSIFICATION AND SURVEY

International Association for Vegetation Science (IAVS)

Vegetation Classification and Survey 7: 9–47
doi: 10.3897/VCS.171362

RESEARCH PAPER SPECIAL COLLECTION ISLANDS AND ARCHIPELAGOS

Diversity of vegetation and key to the plant communities of the island of Lemnos (North Aegean, Greece)

Erwin Bergmeier[1]

1 *Vegetation & Phytodiversity Analysis, Georg-August University of Göttingen, Göttingen, Germany*

Corresponding author: Erwin Bergmeier (erwin.bergmeier@bio.uni-goettingen.de)

Academic editor: Riccardo Guarino ♦ **Linguistic editor:** Lynda Weekes
Received 7 September 2025 ♦ **Accepted** 10 February 2026 ♦ **Published** 24 March 2026

Abstract

Aims: Despite the syntaxonomic overview of European vegetation, EuroVegChecklist (EVC), there are still considerable gaps in our knowledge regarding the occurrence, composition and distribution of plant communities in parts of Europe, such as the eastern Mediterranean region. This is mainly due to the lack of comprehensive local vegetation surveys. In order to progressively fill these gaps and provide basic data for the assessment and conservation of biological diversity, all vegetation formations of an island were examined. **Study area:** The island of Lemnos (North Aegean, Greece). **Methods:** A sample of 877 original relevés was grouped and further classified assisted by TWINSPAN down to alliance and association level. **Results:** The relevés include approximately 14,000 plant records of 842 vascular plant species, that correspond to about 80% of the island's species pool. A total of 103 vegetation types (associations and equivalents) were classified, that correspond to 36 EVC-standardised classes and 77 alliances, including many associations and several alliances new or confirmed for Hellas. For the first time, a directory and identification key to the plant communities of an eastern Mediterranean island are presented. As a measure of regional habitat diversity, the ratio of numbers of taxa and alliances is offered. The most species-rich habitat types were ruderal pasturelands, cultivated fields and fallows, phrygana and dry grasslands, further saltmarsh and coastal hinterland habitats. The habitats with the highest proportion of indicator species were the dry grasslands and inland cliffs, the coastal dunes and rocks, and the permanently or seasonally wet areas. **Conclusions:** Comprehensive vegetation surveys on islands (and elsewhere) provide baseline information on habitat diversity, indicator species and conservation priorities. Such studies are needed to review and update the EVC and its species list of classes in regions insufficiently researched so far.

Taxonomic reference: Dimopoulos et al. (2013), with updates on the Flora of Greece web, https://portal.cybertaxonomy.org/flora-greece/content).

Syntaxonomic reference: Mucina et al. (2016); for exceptions and associations see information in the Suppl. materials 9, 10.

Abbreviations: DSCEV = Diagnostic Species of Classes of the European Vegetation; EVC = EuroVegChecklist (Mucina et al. 2016); TWINSPAN = two-way indicator species analysis.

Keywords

Aegean island, delta diversity, Greece, identification key, island biogeography, plant community, plant diversity, syntaxonomy, vegetation

PENSOFT

Copyright *Erwin Bergmeier*. This is an open access article distributed under the terms of the Creative Commons Attribution License (CC-BY 4.0), which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

Introduction

This is an island vegetation inventory. Local vegetation inventories provide fundamental data that is essential for the assessment and conservation of habitats. Island inventories are of particular interest in the Mediterranean basin, as the region is extraordinarily rich in islands (around 11,000) and is home to almost 10% of the world's plant species (Greuter 1991; Médail 2017; Thompson et al. 2025).

I examine the vegetation of the Aegean island of Lemnos as a whole and try to distinguish and describe all the plant communities that occur there. In contrast to some larger Mediterranean islands, small and medium-sized islands have rarely been studied to cover all occurring vegetation types. A recent example for a complete overview is the Maltese Islands vegetation monograph by Brullo et al. (2020). In the eastern Mediterranean where detailed and comprehensive vegetation studies are still scarce, the lack of local and regional vegetation surveys is particularly noted. In Greece, while vegetation types of many wooded, coastal and aquatic habitats are comparatively well studied, others such as grasslands, human-made environments and most rare and small-scale habitats are as yet poorly known. Such knowledge gaps have become evident in European overviews of vegetation types (EuroVegChecklist, Mucina et al. 2016) and international vegetation maps (Bohn and Neuhäusl 2002; Preislerová et al. 2022), where indications of vegetation alliances and higher syntaxa of the Greek territory are often tentative, unsubstantiated or based on insufficient data.

The most important comprehensive national vegetation handbook, the Manual of Habitat types just published (Tsiripidis et al. 2025) is based on the evaluation of available literature and an extensive, yet unpublished vegetation dataset. It provides invaluable information on the distribution, composition, ecology and threats of all natural and semi-natural habitats in the country. However, the habitats are predefined and the description of vegetation units lacks species-plot tables. With its focus on Annex I habitat types (European Commission 2013), strictly synanthropic vegetation is disregarded.

The flora of Lemnos with its about 1050 native and established species can be considered well-known now (Bergmeier et al. 2021; Ristow et al. 2022), from the classic works of Rechinger (1943) through the first comprehensive investigation by Panitsa et al. (2003) to the recent Terra Lemnia inventory (Bergmeier et al. 2021; Georgiadis et al. 2022; Ristow et al. 2022). In contrast, knowledge about the island's vegetation has remained superficial. Rauh (1949) mapped four very general habitat units (rock coast, saltmarsh and lowlands, macchia, and phrygana with dryland). Rauh (1949) and Rechinger and Rechinger-Moser (1951) provided species lists of broad formations, namely macchia, phrygana, dry grassland, riparian vegetation, ruderal vegetation, and cliffs.

The aim of this study is therefore to classify the vegetation data collected on the island, to make the classification outcome accessible and comparable, and to provide qualitative and quantitative data at the plant community level for multiple purposes where site-scale and landscape-scale as well as between-site and between-community diversity data (alpha through delta diversity) are required. For accessibility, an identification key has been created. It serves to show that the plant communities are sufficiently characterised by floristic, structural and ecological properties. The research questions here addressed are

(1) What plant communities (associations and equivalents) occur on the island and to which alliances (and higher-rank syntaxa) in the European vegetation checklist (EuroVegChecklist) do they correspond?
(2) Are there plant communities (associations and alliances) new to, or confirmed for, the Aegean and Hellenic vegetation?
(3) How are plant species distributed across the various groups of habitat-specific vegetation units, and what species occur primarily or exclusively in certain units (habitat indicators)? What habitats are thus most important for the island flora and for its preservation?

Study area

The island of Lemnos (Limnos) covers an area of approximately 476 km^2. It is the seventh largest among the Aegean islands (but ranks as number four in the Aegean in terms of coastline length) (ELSTAT 2011). Situated in the centre of the north Aegean, Lemnos is almost equidistant from the mouth of the marine channel of the Dardanelles, Turkey, and the Athos peninsula of Chalkidiki in mainland Greece. Lemnos is a municipality in the administrative region of the North Aegean. The current number of inhabitants is reported to be over 16,000, corresponding to a mean population density of about 34/km^2 (which is slightly or considerably lower than that of islands of similar size in the Aegean).

Limnos is amongst the earliest inhabited Aegean islands. It is known to be populated since the late Paleolithic period. By the Early Bronze Age, around 3,000 BC, the island had already become an important place in the trade network across the Aegean and Asia Minor, and furthermore towards the Black Sea (Kouka 2002). It produced agricultural surplus by cultivating grapevines and wheat. The fertile soils have been praised since ancient times, like Theophrastos did in the 4th century BC (Paximadas 2024). The agricultural and husbandry traditions on the island have been maintained. In recent times, despite gradual abandonment of the countryside, high quality agricultural and livestock products are still produced (Paximadas 2024). The main crops are currently grapes, barley and wheat, further pulses, sesame and fruits such as figs, almonds, melons, tomatoes and pumpkins. The agricultural sector with, according to the 2001 census, 18% of the economically active population working in farms or in related facilities for food production, has remained more important on Lemnos than on any other island in the Aegean.

It is not quite accurate to characterize the climate of Lemnos as typically Mediterranean. Clearly, there is a Csa climate (Kottek et al. 2006) with its characteristic sharp contrast of dry and moderately hot summers and mild winters with rainfall maxima commonly in December (HNMS 2023). But moderate frost (according to HNMS minimum temperature by −6 °C at the airport) and occasional snowfall are not uncommon in winter. Dry north(eastern) winds (meltemia, etesians) are frequent and can be strong especially when blowing through the Dardanelles channel opposite Lemnos. It is this geographical location of Lemnos exposed to the northeasterlies that is responsible for the relatively dry subhumid (to almost subarid) mesoclimate with rainfall of only about 500 mm/a (HNMS 2023). It has been discussed that the meltemia are the main reason for the island's lack of trees (almost) (Rauh 1949; Rechinger and Rechinger-Moser 1951; Bebeli and Thanopoulos 2024). Trees are indeed restricted to valleys and sheltered sites. If exposed, they remain low and windshorn. The original groves of *Quercus coccifera* that Rauh (1949) noted in two sites (near Therma and SSE of Moudros) are still there and, 80 years later, stunted and macchia-like as they had been those years ago. The typical vegetation of wind-exposed and grazed Aegean hillsides is the dwarf-shrub formation known as phrygana. On the greater part of Lemnos, then (Rauh 1949) and now, phrygana has been the prevailing vegetation.

Lemnos is hilly in its western half, with elevations mostly between 100 m and 300 m and lower in the east. The highest elevation, Vigla, 430 m, is near the northwest coast. Alluvial deposits of loamy materials and sands, mostly weathered products from the sedimentary and volcanic rocks, form extensive flats in the centre, north of the Gulf of Moudros. Dunes are most common in the east. The oldest and most common rocks exposed are Eocene to Oligocene sedimentary sandstone, claystone and marl (molasse), followed by Miocene andesites and other igneous rocks, derived from ancient volcanism. They predominate in the west of the island, while tuffs are more common in the central and eastern parts (Higgins and Higgins 1996). Ancient volcanism with lava domes and flows are obvious especially in the surroundings of the island's capital, Myrina (formerly Kastro). The dune sands are derived mainly from weathered Pleistocene calcareous sandstones, the latter are exposed or semi-covered by blown dune sand (IGME 1993). In the east, three lagoons, the large saline Aliki Limnou, the smaller Asprolimni and the brackish Chortarolimni, are important sites for habitat, plant and bird diversity. They are included in the two overlapping Natura 2000 sites, the Site of Community Importance GR4110001 under the Habitats Directive and the Special Protected Area GR4110006 under the Birds Directive.

In recent years, interdisciplinary research on the natural resources of the island of Lemnos in the northeast Aegean has been carried out by a team of scientists, including the author, in the project Terra Lemnia coordinated by MedINA, Mediterranean Institute for Nature and Anthropos (terra-lemnia.net). The overarching project goal, the results of which are well summarized in "The Plant Wealth of Lemnos" edited by Bebeli and Thanopoulos (2024), is to preserve "traditional cultural practices that shape landscapes of high ecological value". The research included vegetation studies on fields and pasturelands across the island. It soon became obvious that the island as a whole is of high ecological value and that its landscapes and vegetation features have been shaped by traditional land-use practices (Georgiadis et al. 2022; Bebeli and Thanopoulos 2024). The original focus on arable fields and rural areas (Georgiadis et al. 2022; Rinne et al. 2025) was extended to cover all vegetation on the island, albeit with a smaller database than for arable vegetation. Plot-based sampling criteria were based on both high levels of grid-based geographic and floristic coverage.

Methods

With an initial focus on arable fields and pastures, flora and vegetation surveys were carried out in the years 2018–22 and 2024–25, in spring (April–May) and autumn (October). An attempt was made to survey as many locations and as much of the island's vegetation as possible. A total of 877 relevés were collected using Braun-Blanquet plot sampling methods (Dierschke 1994; Kent 2012). To cover all kinds of vegetation, including rare and small-scale assemblages, the plot locations were selected preferentially in the field, not systematically nor randomly. The plot sizes were vegetation-dependent, but consistent within classes of vegetation, with 1–4 m^2 in small-scale ephemeral low vegetation, 8–25 m^2 in ruderal herb- and grasslands as well as rocky and coastal habitats, and 50–200 m^2 in arable fields, phrygana, scrub and woodland. Plot shapes were quadratic or, in ecotone and riparian habitats, narrowly rectangular. Distances between plots of similar vegetation assemblages were usually at least 200 m apart. Plots with very different environmental conditions could be much closer to each other. Vascular plant species (completely recorded), bryophytes and lichens (if present, certainly incomplete) and their cover-abundance values (extended Braun-Blanquet scale) were noted per plot. Location coordinates, slope steepness and aspect, soil texture, land-use and other anthropogenic effects were noted too. Plant specimens collected for further identification are stored in the author's herbarium.

The relevés were digitized using Turboveg 2 (Hennekens and Schaminée 2001) and classified in JUICE using the multivariate divisive hierarchical classification tool TWINSPAN (Tichý 2002). Prior to multivariate classification, the relevés were grouped in four broad subsets, (a) woody vegetation, (b) vegetation of rocks and dry grassland, (c) coastal and wetland vegetation, and (d) anthropogenic (ruderal and agrestal) vegetation. Each group was exported to JUICE and classified separately. Different layer occurrences of a species in a relevé were combined except for woody plants in herb and tree layers. Different taxa were combined into a few species pairs

when identification was not always possible. Taxa identified to genus only were retained in classification and per-plot species richness unless there were congeneric species in the relevé. Generic taxa were disregarded in overall species richness assessment.

TWINSPAN default settings were four pseudospecies cut levels (0,5,25,50%) and six hierarchy levels of division. Groups of relevés in the ordered species-relevé matrix that were not considered sufficiently distinct in terms of their species composition were combined. Some larger clusters were further divided. Relevés that were not considered correctly classified in terms of species dominance and the presence or absence of differential species were manually transferred to another cluster. The Tsiripidis algorithm found relevé groups that were positively differentiated against other, negatively differentiated groups and helped determine differential taxa (Tsiripidis et al. 2009). For each classified subset a synoptic table with percentage frequency values (constancy) was created in JUICE. Species that differentiated one or more clusters (vegetation types) from others were rearranged in consecutive rows, and species in differential species groups were ordered according to decreasing constancy. The vegetation types classified in the data subsets were identified as part of a phytosociological vegetation type at association (or equivalent informal unit), alliance or, if this was not possible, at higher rank. For this purpose, the syntaxonomical standard EuroVegChecklist (Mucina et al. 2016, with its List of diagnostic species of classes) was used, with syntaxonomic and nomenclatural updates as indicated (Suppl. materials 9, 10). Relevant south European vegetation checklists, monographs and revisions consulted for proper syntaxonomic identification included among others Brullo and Guarino (1998), Bergmeier and Raus (1999), Rivas-Martínez et al. (1999), Rivas-Martínez et al. (2002), Brullo and Giusso del Galdo (2003), Brullo et al. (2007), Brullo et al. (2020), Díez-Garretas et al. (2003), Ninot et al. (2010–2011), Costa et al. (2012), Biondi et al. (2014), García-Madrid et al. (2016), Marcenò et al. (2018, 2024), Brullo et al. (2020), Landucci et al. (2020), Terzi et al. (2023, 2024), Iemelianova et al. (2025). A syntaxonomic conspectus for the vegetation of Lemnos has been provided. An identification key to the vegetation types was created based on floristic, structural and ecological features of vegetation obtained from the relevés and field observations. In order to quantify the species pool of the island differentiated by habitat, accumulated generalist and indicator species richness values were calculated for ten habitat units, defined as groups of vegetation classes (not per alliance or class as some rare alliances or classes were represented in the dataset by just one or two relevés). This ensures that there are sufficient records so that the (very different) figures per habitat unit are not attributable to the sample size. The total species pool per habitat unit and the pool of preferential (almost exclusive) species (habitat indicator species) were determined by evaluating the different frequencies and abundances of species in the vegetation types, together with empirical observations.

Results

Floristic and community diversity figures

The total area of all 877 sample plots is 41,900 m^2 (4.2 ha) or only 0.009% of the island's surface area. The 877 relevés collected across the island (Figure 1) form nevertheless a representative vegetation dataset, both in terms of geographical and floristic coverage. They were located in 156 grid squares (degree arcminutes; World Geodetic System 84), which correspond to approximately 88% of the total number of grid squares (177) in which the island has a terrestrial share of 50–100%. The relevés include some 14,000 species records, with a total of 842 plant species and additional subspecies (cultivated plants, non-vascular plants and taxa on genus level excluded). This is approximately 80% of the island's vascular flora of about 1050 native and naturalized species. The mean number of species per plot, or alpha diversity, was 16.0 species, with a minimum of one species and a maximum of 88 species. The most-represented plant families in the entire dataset were *Poaceae* (123 species, 14.6% of the recorded taxa), *Asteraceae* (106, 12.6%) and *Fabaceae* (97, 11.5%), far behind followed by *Caryophyllaceae* (38, 4.5%), *Brassicaceae* (33, 3.9%), *Apiaceae* (31, 3.7%), *Chenopodiaceae* (25, 3.0%), *Lamiaceae* (24, 2.9%) and *Ranunculaceae* (21, 2.5%). All other families occurred with 20 or less species.

A total of 103 associations (or equivalent informal communities) were identified on the island of Lemnos, corresponding to 77 EuroVegChecklist-standardized vegetation alliances and 36 classes. This corresponds to a share of 55% of the total number of 65 classes recorded in Greece (Preislerová et al. 2022; Tsiripidis et al. 2025). The Standardised Delta Diversity Index, the ratio of taxa (species and additional subspecies) and syntaxa (classes or alliances), is a measure of the syntaxonomic diversity of an area (community diversity or delta diversity; Bergmeier 2020). It is around 29.2 (class level) or 13.6 (alliance level) for Lemnos (approx. 1,050 established, i.e., native and naturalized, vascular plant species and subspecies, 36 classes and 77 alliances). This is likely to correspond to a relatively high degree of vegetation diversity in the reference area. However, as comparative values from other areas are still largely lacking, it is not yet possible to further interpret these values for delta diversity.

Classification and identification of vegetation types

The classification revealed a total of 94 clusters which comprise 103 vegetation types (associations and equivalent informal communities), representing 77 syntaxa at alliance rank (or equivalent) and 36 at the level of class (two vegetation units are currently not allocatable). The species composition of the vegetation types identified on the island is shown in the synoptic tables (Tables 1–4; in the following in brackets the vegetation type numbers as in Tables 1–4). For a syntaxonomic conspectus see Table 5. The types represent chiefly vegetation of the Mediterranean zone as well as azonal vegetation.

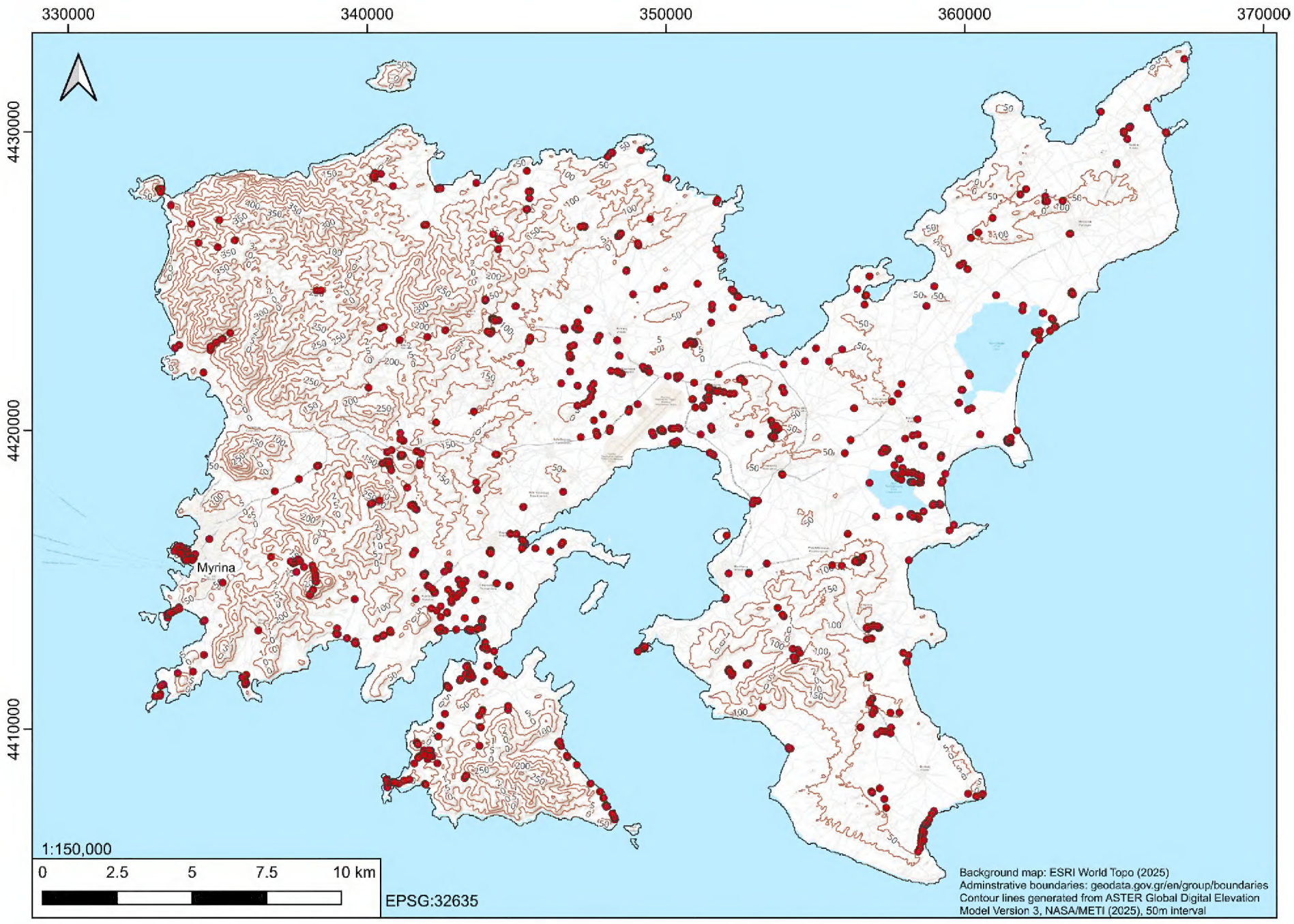

Figure 1. Locations of relevés (sample plots) collected on the island of Lemnos.

Zonal woodland and and tall sclerophyllous shrubland of the *Quercetea ilicis* were poorly represented. They comprised of patches of *Quercus coccifera* macchia (14) restricted to a few hillsides (Figure 2a), local *Quercus ithaburensis* subsp. *macrolepis* open woodland (15) on sandy ground (Figure 2b), and a single wild olive (*Olea europaea* var. *sylvestris*) grove (17). Woody vegetation associated with temporarily or permanently wet streambeds was rather variable, including *Ulmus minor* and *Populus alba* gallery forest (1; Figure 2c), *Platanus orientalis* ravine forest (2) and an ecotonal *Rosa sempervirens* mantle scrub in valleys (16; Figure 2d). Riparian scrub communities of *Vitex agnus-castus* (Figure 2e) or *Nerium oleander* occurred along seasonal streams and next to waterbodies (3, 7). *Tamarix hampeana* and *Tamarix smyrnensis* shrubland (5; Figure 2f) associated with (brackish) groundwater was common in, but not restricted to, saltmarshes. *Elaeagnus angustifolia* woods (6) were found to be a characteristic feature of sandy soils within reach of groundwater in the eastern parts of the island (Figure 2g). Dense *Ficus carica* shrubs (4) formed an equivalent type of vegetation on alluvial soil and by springs on hillsides.

Phrygana (east Mediterranean dwarf-shrubland) was found to be extensive and fairly diverse (4 types). They included a strictly coastal phrygana on blown base-rich sands with *Centaurea spinosa* (8; Figure 3a), a species-rich *Thymbra capitata-Anthyllis hermanniae* phrygana on sandstones and volcanic hillsides (9; Figure 3b) which is widespread in the Aegean, further a *Sarcopoterium spinosum*-dominated pioneer phrygana (10) on repeatedly disturbed ground, and locally *Cistus salviifolius* phrygana rich in that species as well as in *C. creticus* on inland acidic sands (11; Figure 3c).

Strictly aquatic (limnic) vegetation was rare and found in a few permanent inland waters of high electrolyte content and fluctuating water levels with *Myriophyllum spicatum* and batrachian aquatic plants (*Ranunculus saniculifolius*, *Ranunculus rionii*) (58; Figure 3d), moreover in coastal, pronouncedly brackish small waterbodies with submerged *Chara galioides* (57; Figure 3e).

Much more diverse were groupings of coastal and saline or brackish vegetation which were found on Lemnos represented by no less than 14 alliances on coastal sands, shingle and cliffs, and 15 alliances of saltmarsh and brackish wetlands. Perennial herbaceous coastal dune vegetation (64) characterized by typical Mediterranean psammophytes such as *Pancratium maritimum*, *Achillea maritima*, *Eryngium maritimum*, *Ammophila arenaria* subsp. *australis* and *Elytrigia juncea* was found in many sandy coastal areas but with very different species diversity and abundance (Figure 3f). On backdunes this vegetation merges into *Centaurea spinosa* phrygana (8). Locally on sandy flats with moderate amounts of rather nutrient-rich and base-rich blown sand was vegetation with *Anthemis tomentosa* and *Verbascum pinnatifidum* (63; Figure 3g). Ephemeral vegetation of annual psammophytes (28) including the rare *Saponaria jagelii* and *Malcolmia nana* occurred in patches with moderate sand turnover (Figure 3h).

Table 1. Plant communities of woods, scrub and phrygana on the island of Lemnos. 1, *Lauro nobilis-Fraxinion angustifoliae*; 2, *Platanion orientalis*; 3, 7, *Rubo sancti-Nerion oleandri*; 4, 5, 6, *Tamaricetalia africanae*; 8, *Helichryso barrelieri-Centaureion spinosae*; 9, 10, *Helichryso barrelieri-Phagnalion graeci*; 11, *Hyperico olympici-Cistion cretici*; 12, *Balloto nigrae-Robinion*; 13, *Nicotiano glaucae-Ricinion communis*; 14, *Quercion calliprini*; 15, *Quercion macrolepidis*; 16, *Pyro spinosae-Rubetalia ulmifolii*; 17, *Pistacio terebinthi-Rhamnion alaterni*; 18, *Prunetalia spinosae*; 19, *Arundo plinii-Rubion ulmifolii*. C/D, characteristic or differential species. The C/D species are indicative for the given syntaxon or its subordinate syntaxa. The frequency (constancy) figures for vegetation types are percentages, those with <5 relevés in italics to indicate potentially lesser diagnostic reliability. Species names followed by *t* refer to tree layers. Species with <30% constancy in any column (vegetion type) are omitted (except for few species considered diagnostic). An unabridged synoptic table and a full table with all relevés are recorded in Suppl. material 1 and Suppl. material 5, respectively.

Vegetation type number	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**18**	**15**	**16**	**17**	**19**
Number of relevés	**4**	**1**	**7**	**2**	**4**	**8**	**11**	**9**	**21**	**14**	**2**	**4**	**2**	**7**	**3**	**2**	**2**	**1**	**4**
C/D Alno glutinosae-Populetea albae																			
Ulmus minor t	*100*	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Dioscorea communis	*100*	.	.	.	.	.	.	.	.	.	.	.	.	29	.	.	.	.	.
Piptatherum miliaceum	*100*	*100*	14	.	.	13	18	.	19	7	.	.	*50*	.	.	.	.	.	.
Rumex conglomeratus	*75*	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Smyrnium creticum	*75*	.	.	.	.	.	.	.	.	.	.	.	.	.	.	*50*	.	.	.
Arum concinnatum	*50*	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Parietaria judaica	*50*	*100*	14	.	.	.	.	.	.	.	.	*25*	*50*	.	.	.	.	.	.
Populus alba t	*25*	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Poa trivialis subsp. *sylvicola*	*75*	*100*	29	.	.	.	.	.	.	.	.	.	.	.	.	*50*	.	.	.
Melissa officinalis subsp. *altissima*	*25*	*100*	14	.	.	.	9	.	.	.	.	.	.	.	.	.	.	.	.
Bromus diandrus	*25*	*100*	.	.	.	13	18	.	.	.	.	*25*	.	.	.	.	.	.	.
Cirsium creticum	*25*	*100*	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Carex otrubae	*25*	*100*	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Lamium garganicum subsp. *garganicum*	*25*	*100*	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Platanus orientalis t	.	*100*	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Salix alba t	.	*100*	.	.	.	.	9	.	.	.	.	.	.	.	.	.	.	.	.
Juncus inflexus	.	*100*	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Plantago major	.	*100*	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Mentha longifolia	.	*100*	14	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Rumex crispus	.	*100*	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Carex distans	.	*100*	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Ranunculus constantinopolitanus	.	*100*	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Berula erecta	.	*100*	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
C/D Nerio-Tamaricetea																			
Nerium oleander	.	*100*	100	.	.	.	18	.	.	.	.	.	.	.	.	.	.	.	.
Juncus heldreichianus	.	*100*	71	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Dracunculus vulgaris	*50*	*100*	43	.	.	.	9	.	.	.	.	.	.	43	*33*	.	.	.	.
Ficus carica	*25*	.	29	*100*	.	25	9	.	.	.	.	*25*	.	.	*33*	.	.	.	.
Tamarix hampeana	.	.	.	.	*75*	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Tamarix smyrnensis	.	.	.	.	*25*	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Phragmites australis	.	.	.	.	*25*	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Elaeagnus angustifolia	.	.	.	.	.	100	9	.	.	.	.	.	.	.	.	.	.	.	.
Lycium europaeum	.	.	.	.	.	25	.	.	.	.	.	.	.	.	.	.	.	.	.
Vitex agnus-castus	.	.	29	.	*50*	.	100	.	.	.	.	.	.	.	.	.	.	.	.
C/D Helichryso barrelieri-Centaureion spinosae																			
Centaurea spinosa	.	.	.	.	.	.	.	100	24	7	.	.	.	.	.	.	.	.	.
Sporobolus pungens	.	.	.	.	.	.	.	56	.	.	.	.	.	.	.	.	.	.	.
Aetheorhiza bulbosa subsp. *bulbosa*	.	.	.	.	.	.	.	44	5	7	.	.	.	.	.	.	.	.	.
Limonium virgatum	.	.	.	.	.	.	.	44	10	.	.	.	.	.	.	.	.	.	.
Limonium sinuatum	.	.	.	.	.	.	.	44	.	.	.	.	.	.	.	.	.	.	.
Matthiola tricuspidata	.	.	.	.	.	.	.	33	.	.	.	.	.	.	.	.	.	.	.
Elytrigia juncea	.	.	.	.	.	.	.	33	.	.	.	.	.	.	.	.	.	.	.
C/D Helichryso barrelieri-Phagnalion graeci																			
Anthyllis hermanniae	.	.	.	.	.	.	.	.	86	.	.	.	.	.	.	.	.	.	.
Thymbra capitata	.	.	.	.	.	.	.	11	76	36	.	.	.	.	.	.	.	.	.
Teucrium divaricatum	.	.	.	.	.	.	.	.	71	29	.	.	.	14	.	.	.	*100*	.
Helichrysum stoechas subsp. *barrelieri*	.	.	.	.	.	.	.	.	57	.	.	.	.	.	.	.	.	.	.
Fumana thymifolia	.	.	.	.	.	.	.	.	38	7	.	.	.	.	.	.	.	.	.
Astragalus spruneri	.	.	.	.	.	.	.	.	29	.	.	.	.	.	.	.	.	.	.
Eryngium campestre	.	.	.	.	.	.	.	11	33	71	.	.	.	.	*33*	.	.	.	.
Vicia cretica	.	.	.	.	.	.	.	.	33	57	.	.	.	.	.	.	.	.	.

Vegetation type number	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**18**	**15**	**16**	**17**	**19**
Number of relevés	**4**	**1**	**7**	**2**	**4**	**8**	**11**	**9**	**21**	**14**	**2**	**4**	**2**	**7**	**3**	**2**	**2**	**1**	**4**
Euphorbia exigua	.	.	.	.	.	.	.	.	33	57	.	.	.	.	.	.	.	.	.
Galium murale	.	.	.	.	.	.	9	.	29	57	.	.	.	.	.	.	.	*100*	.
Sherardia arvensis	.	.	.	.	.	.	.	.	29	93	.	.	.	.	.	*50*	.	.	.
Trifolium scabrum	.	.	.	.	.	.	.	11	14	93	.	.	.	.	.	.	.	.	.
Trifolium campestre	.	.	14	.	.	13	.	.	24	86	*100*	.	.	.	.	.	.	.	.
Tordylium apulum	.	.	14	.	.	.	.	11	.	86	.	.	.	.	.	.	.	.	.
Rumex tuberosus subsp. *creticus*	*75*	.	14	.	.	13	.	11	5	79	.	*25*	.	43	.	*50*	.	.	.
Euphorbia peplus	.	.	.	.	.	.	.	.	19	79	.	.	.	14	.	.	.	.	.
Hypochaeris achyrophorus	.	.	.	.	.	.	.	.	14	79	.	*25*	.	.	.	.	.	.	.
Anthoxanthum odoratum	.	.	.	.	.	.	.	.	24	71	.	.	.	.	.	*50*	.	.	.
Scorpiurus muricatus	.	.	.	.	.	.	.	.	14	71	.	.	.	.	.	.	.	.	.
Hymenocarpos circinnatus	.	.	.	.	.	.	.	.	5	71	.	.	.	.	.	.	.	.	.
Trifolium stellatum	.	.	.	.	.	.	.	11	5	64	.	.	.	.	.	.	.	.	.
Linum bienne	*25*	.	.	.	.	.	.	.	.	64	.	.	.	.	.	.	.	.	.
Carlina corymbosa subsp. *graeca*	.	.	.	.	.	.	9	.	24	57	.	.	.	.	*33*	.	.	.	*25*
Vulpia ciliata	.	.	.	.	.	.	.	.	14	57	.	.	.	.	.	.	.	.	.
Trifolium uniflorum	.	.	.	.	.	.	.	11	5	57	.	.	.	.	.	.	.	.	.
Cerastium glomeratum	.	.	.	.	.	.	9	.	5	57	.	.	.	.	.	.	.	.	.
Catapodium rigidum	.	.	.	.	.	.	.	.	5	57	.	.	.	.	.	.	.	.	.
Filago pygmaea	.	.	.	.	.	.	.	.	.	57	.	.	.	.	.	.	.	.	.
Lagoecia cuminoides	.	.	.	.	.	.	.	11	10	50	.	.	.	.	.	.	.	.	.
Salvia verbenaca	.	.	.	.	.	.	.	.	.	50	.	.	.	.	.	.	.	.	.
Urospermum picroides	*25*	.	.	.	.	.	.	11	5	50	.	.	.	.	.	.	.	.	.
Plantago lagopus	.	.	.	.	.	.	.	.	.	43	.	*25*	.	.	.	.	.	.	.
Psilurus incurvus	.	.	.	.	.	.	.	.	10	43	.	.	.	.	.	.	.	.	.
Erophila praecox + verna	.	.	.	.	.	.	.	.	5	43	.	.	.	.	.	.	.	.	.
Biscutella didyma	.	.	.	.	.	.	.	.	5	43	.	.	.	.	.	.	.	.	.
Silene gallica	.	.	.	.	.	.	.	.	.	43	.	.	.	.	.	.	.	.	.
Reichardia picroides	.	.	.	.	.	.	.	11	10	43	.	.	.	.	.	.	.	.	.
Sagina apetala	.	.	.	.	.	.	.	.	5	43	.	.	.	.	.	.	.	.	.
Convolvulus elegantissimus	.	.	.	.	.	.	.	.	10	43	.	.	.	.	.	.	.	.	.
Senecio vulgaris	.	.	.	.	.	.	.	.	10	43	.	.	.	.	.	.	.	.	.
Medicago monspeliaca	.	.	.	.	.	.	.	.	.	43	.	.	.	.	.	.	.	.	.
Knautia integrifolia	*25*	.	.	.	.	.	.	.	.	36	.	.	.	.	.	.	.	.	.
Medicago minima	.	.	.	.	.	.	.	.	.	36	.	.	.	.	.	.	.	.	.
Filago pyramidata	.	.	.	.	.	.	.	.	.	36	.	.	.	.	.	.	.	.	.
Crupina crupinastrum	.	.	.	.	.	.	.	.	10	36	.	.	.	.	.	.	.	.	.
Trifolium subterraneum	.	.	.	.	.	.	.	.	.	36	.	.	.	.	.	.	.	.	.
Plantago bellardii	.	.	.	.	.	.	.	.	5	36	.	.	.	.	.	.	.	.	.
Rostraria cristata	.	.	.	.	.	.	.	.	.	36	.	.	.	.	.	.	.	.	.
Sarcopoterium spinosum	.	.	.	.	.	.	18	11	95	100	*50*	.	.	.	*33*	.	.	*100*	.
Dactylis glomerata subsp. *hispanica*	.	.	14	.	.	.	.	22	81	86	*50*	*25*	.	.	.	*50*	.	.	.
Leontodon tuberosus	.	.	14	.	.	.	.	.	67	100	*100*	*25*	.	.	.	*50*	.	.	.
Anagallis arvensis	.	.	14	.	.	13	18	11	48	79	.	*25*	.	.	.	*50*	.	*100*	.
Carex flacca subsp. *serrulata*	.	.	.	.	.	.	.	.	57	36	*50*	.	.	43	.	.	.	.	.
Dorycnium hirsutum	.	.	.	.	*25*	.	.	.	48	36	.	.	.	.	.	.	.	.	.
Asphodelus ramosus	.	.	.	.	.	.	9	11	38	64	*100*	.	.	.	*67*	*50*	.	*100*	.
Teucrium capitatum	.	.	.	.	.	.	.	.	33	29	.	.	.	.	*33*	.	.	.	.
Asterolinon linum-stellatum	.	.	.	.	.	.	.	.	33	50	*50*	.	.	.	.	.	.	.	.
Cistus creticus	.	.	.	.	.	.	.	.	67	14	*100*	.	.	29	.	*50*	.	.	.
C/D Hyperico olympici-Cistion cretici																			
Cistus salviifolius	.	.	.	.	.	.	.	.	19	.	*100*	.	.	.	.	.	.	.	.
Tuberaria guttata	.	.	.	.	.	.	.	.	10	7	*100*	.	.	.	.	.	.	.	.
Petrorhagia dubia	.	.	.	.	.	.	.	.	5	57	*50*	.	.	.	.	.	.	.	.
Poa bulbosa	.	.	.	.	.	.	.	.	.	57	*50*	.	.	.	.	.	.	.	.
Aira elegantissima	.	.	.	.	.	.	.	.	19	50	*50*	.	.	.	.	.	.	.	.
Filago gallica	.	.	.	.	.	.	.	.	5	36	*50*	.	.	.	.	.	.	.	.
Trifolium arvense	.	.	.	.	.	.	.	.	.	36	*50*	.	.	.	.	.	.	.	.
Rumex bucephalophorus subsp. *aegaeus*	.	.	.	.	.	13	.	11	5	14	*50*	*25*	.	.	.	.	.	.	.
Calicotome villosa	.	.	.	.	.	.	.	.	14	14	*50*	.	.	.	.	.	.	.	.
Hypericum empetrifolium	.	.	.	.	.	.	.	.	5	7	*50*	.	.	.	.	.	.	.	.

Vegetation type number	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**18**	**15**	**16**	**17**	**19**
Number of relevés	**4**	**1**	**7**	**2**	**4**	**8**	**11**	**9**	**21**	**14**	**2**	**4**	**2**	**7**	**3**	**2**	**2**	**1**	**4**
C/D Robinietea																			
Ailanthus altissima t	.	.	.	.	.	.	.	.	.	.	.	*100*	.	.	.	.	.	.	.
Bromus madritensis	.	.	.	.	.	.	.	.	.	36	.	*50*	.	.	.	.	*50*	.	.
Avena sterilis	.	.	.	*50*	.	.	.	11	.	.	.	*50*	.	.	*33*	.	.	.	.
Robinia pseudoacacia t	.	*100*	.	.	.	.	.	.	.	.	.	*25*	.	.	.	.	.	.	.
C Nicotiano glaucae-Ricinion communis																			
Opuntia ficus-indica	.	.	.	.	.	.	.	.	.	.	.	.	*100*	.	.	.	.	.	.
C/D Quercion calliprini																			
Quercus coccifera	*25*	.	.	.	.	.	.	.	14	.	.	.	.	100	.	.	.	.	.
Osyris alba	*25*	.	.	.	.	.	.	.	38	.	.	.	.	86	.	.	*100*	.	.
Asparagus acutifolius	*100*	.	.	.	.	.	27	22	33	29	.	*25*	.	71	*100*	*50*	*50*	.	.
Aetheorhiza bulbosa subsp. *microcephala*	.	.	.	.	.	.	9	.	43	14	.	.	.	43	.	.	.	*100*	.
Lonicera etrusca	*25*	.	.	.	.	.	.	.	.	.	.	.	.	43	*67*	*50*	.	.	.
Ruscus aculeatus	*75*	.	.	.	.	.	.	.	.	.	.	.	.	43	*33*	*50*	*50*	.	.
Umbilicus rupestris	*25*	.	.	.	.	.	.	.	.	7	.	.	.	43	.	.	.	.	.
Veronica cymbalaria	*25*	.	.	.	.	.	.	.	.	.	.	.	.	43	.	*50*	.	.	.
Phillyrea latifolia	.	.	.	.	.	.	.	.	10	.	.	.	.	29	.	.	.	.	.
Cyclamen hederifolium	.	.	.	.	.	.	.	.	.	.	.	.	.	29	.	.	.	.	.
Anemone pavonina	.	.	.	.	.	.	.	.	10	7	.	.	.	29	.	.	.	.	.
C/D Prunetalia spinosae																			
Euphorbia characias	*50*	.	.	.	.	.	9	.	10	14	.	.	.	29	*67*	*50*	.	.	.
Ephedra foeminea	.	.	.	.	.	.	.	.	.	.	.	.	.	14	*33*	.	.	.	.
Clematis cirrhosa	.	.	.	.	.	.	.	.	.	.	.	.	.	14	*33*	.	.	.	.
Crataegus azarolus	.	.	.	.	.	.	.	.	.	7	.	.	.	.	*33*	.	.	.	.
Crataegus monogyna	.	.	.	.	.	.	.	.	.	.	.	.	.	.	*33*	.	.	.	.
Prunus dulcis	.	.	.	*50*	.	.	.	.	.	.	.	.	.	.	*33*	.	.	.	*25*
Pyrus communis	.	.	.	.	.	.	.	.	.	.	.	.	.	.	*33*	.	.	.	.
C/D Quercion macrolepidis																			
Quercus macrolepis t	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	*100*	.	.	.
Ferula communis	*100*	*100*	.	.	.	.	.	.	5	7	.	.	.	.	.	*100*	.	.	.
Sonchus asper subsp. *glaucescens*	.	*100*	.	.	.	13	.	.	5	14	.	*25*	.	.	.	*100*	.	.	.
Geranium purpureum	*50*	*100*	14	.	.	.	.	.	10	7	.	.	.	43	.	*100*	.	.	.
Anthriscus caucalis	.	.	.	.	.	25	.	.	.	.	.	*25*	.	.	.	*50*	.	.	.
Urtica pilulifera	.	.	.	.	.	13	9	.	.	.	.	*75*	*50*	.	.	*50*	.	.	.
C/D Pyro spinosae-Rubetalia ulmifolii																			
Rosa sempervirens	*50*	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	*100*	.	.
Prunus spinosa subsp. *dasyphylla*	*25*	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	*100*	.	.
Malva unguiculata	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	50	.	.
Althaea cannabina	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	50	.	*25*
Rosa canina	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	50	.	*25*
Rosa corymbifera	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	50	.	.
C/D Pistacio terebinthi-Rhamnion alaterni																			
Olea europaea t	*25*	.	14	.	.	.	9	.	10	7	.	.	.	14	*33*	.	.	*100*	.
Pyrus spinosa	.	.	.	.	.	.	.	.	5	14	.	.	.	.	*33*	.	.	*100*	.
C Arundo plinii-Rubion ulmifolii																			
Rubus sanctus	*100*	*100*	14	.	.	.	27	.	.	.	.	.	.	.	*33*	*50*	*100*	.	*100*
Others (non-differential species)																			
Geranium rotundifolium	.	.	29	.	.	.	.	.	.	.	.	.	.	.	.	*50*	.	*100*	.
Elytrigia obtusiflora	.	.	.	.	.	25	27	22	14	14	.	.	.	.	*33*	.	.	.	*25*
Origanum vulgare	.	.	.	.	.	.	.	.	.	29	.	.	.	14	*33*	*50*	.	.	.
Vicia hybrida	*25*	*100*	.	.	.	.	.	.	.	.	.	.	.	.	.	*50*	*50*	.	.
Bromus sterilis	.	*100*	14	*50*	.	25	.	.	.	7	.	*25*	.	.	.	.	.	.	.
Senecio vernalis	*25*	.	.	.	.	.	.	11	.	14	*50*	*25*	.	.	.	.	.	*100*	.
Hypericum perfoliatum	*25*	.	.	.	.	.	.	.	38	7	.	.	.	29	.	*100*	.	.	.
Geranium lucidum	*25*	.	29	.	.	.	.	.	.	7	.	.	.	29	.	*50*	.	.	.
Scirpoides holoschoenus subsp. *australis*	.	.	29	.	*25*	.	27	.	.	.	.	.	.	.	.	.	.	.	*25*
Lagurus ovatus	.	.	.	.	.	25	.	33	5	50	.	*25*	.	.	.	.	.	.	.
Ballota acetabulosa	.	.	14	.	.	.	27	11	5	14	.	*25*	.	.	*33*	.	.	*100*	.
Sonchus oleraceus	*25*	.	29	.	.	25	.	.	.	14	*50*	.	.	.	.	.	*50*	.	.
Dittrichia viscosa	.	.	43	.	*25*	13	45	.	10	.	*50*	.	.	.	.	.	*50*	.	*75*
Galium aparine	*50*	*100*	14	.	.	.	9	11	10	29	.	.	*100*	29	.	*100*	*50*	.	.
Hordeum bulbosum	*25*	.	.	.	.	.	.	11	5	43	.	*50*	*50*	.	*33*	*50*	.	.	*50*
Daucus carota	.	*100*	.	.	.	.	9	.	.	.	.	.	.	.	.	.	*50*	.	*50*
Avena barbata	*25*	.	.	.	.	.	.	11	.	50	*50*	*25*	.	.	.	.	.	.	.
Brachypodium distachyon	.	.	14	.	.	.	.	11	33	21	.	.	.	.	.	.	*50*	.	.

Table 2. Plant communities of dry grassland and rocky habitats on the island of Lemnos. 20, *Adiantion*; 21, *Polygonion icarici*; 22, *Stipo-Bupleuretalia semicompositi*; 23, *Plantagini-Catapodion marini*; 24, *Brachypodietalia distachyae*; 25, *Romuleion graecae*; 26, *Malcolmietalia*; 27, *Tuberarion guttatae*; 28, *Maresion nanae*. C/D, characteristic or differential species. The C/D species are indicative for the given syntaxon or its subordinate syntaxa. The frequency (constancy) figures for vegetation types are percentages, those with <5 relevés in italics to indicate potentially lesser diagnostic reliability. Species with <30% constancy in any column (vegetion type) are omitted (except for few species considered diagnostic). An unabridged synoptic table and a full table with all relevés are recorded in Suppl. material 2 and Suppl. material 6, respectively.

Vegetation type number	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**
Number of relevés	**1**	**7**	**5**	**9**	**7**	**12**	**1**	**12**	**23**
C/D Adiantetea									
Adiantum capillus-veneris	*100*	.	.	.	.	.	.	.	.
Nerium oleander	*100*	.	.	.	.	.	.	.	.
Ficus carica	*100*	14	.	.	.	.	.	.	.
C/D Asplenietea trichomanis									
Umbilicus rupestris	.	86	.	.	.	.	.	.	.
Reichardia picroides	.	57	.	22	.	.	.	.	.
Rumex tuberosus subsp. *creticus*	.	57	.	.	.	8	.	.	.
Melica ciliata subsp. *glauca*	.	43	.	.	.	.	.	.	.
Ballota acetabulosa	.	43	.	.	29	.	.	.	.
Campanula lavrensis	.	29	.	.	.	.	.	.	.
Fumaria gaillardotii	.	29	.	.	.	.	.	.	.
Asplenium obovatum	.	14	.	.	.	.	.	.	.
Verbascum rupestre	.	14	.	.	.	.	.	.	.
Asplenium ceterach	.	14	.	.	.	.	.	.	.
Parietaria cretica	.	43	.	33	.	.	.	.	.
C/D Stipo-Trachynietea distachyae									
Asteriscus aquaticus	.	.	80	.	.	.	.	8	.
Hedypnois rhagadioloides subsp. *rhagadioloides*	.	.	80	11	.	25	*100*	8	4
Hypochaeris achyrophorus	.	.	60	.	.	8	.	8	.
Valantia hispida	.	.	40	.	.	.	.	.	.
Urospermum picroides	.	.	40	.	14	8	.	.	.
Lagoecia cuminoides	.	.	40	.	14	8	.	17	.
Valerianella discoidea	.	.	40	.	.	.	.	.	.
Centaurium tenuiflorum	.	.	40	.	.	.	.	8	.
Avellinia festucoides	.	.	40	.	.	8	.	17	.
Crepis micrantha	.	.	40	.	.	.	.	17	22
Euphorbia exigua	.	.	40	.	.	.	.	.	.
Dorycnium hirsutum	.	.	40	.	.	.	.	.	.
Brachypodium distachyon	.	29	40	11	.	.	.	8	.
Bromus intermedius	.	.	40	22	.	8	.	8	.
Anthemis werneri	.	.	.	100	.	8	.	17	.
Catapodium marinum	.	.	.	78	.	.	.	.	9
Medicago littoralis	.	.	.	67	.	.	.	.	9
Trifolium scabrum	.	.	40	67	29	25	.	33	4
Phleum exaratum subsp. *aegaeum*	.	.	.	44	.	.	.	8	.
Holosteum umbellatum	.	.	.	44	.	.	.	.	.
Cichorium pumilum	.	.	.	44	.	.	.	.	.
Limonium sinuatum	.	.	.	22	86	8	.	.	.
Papaver dubium agg.	.	.	.	11	43	.	*100*	.	4
Lolium rigidum	.	14	.	11	57	8	.	.	.
Stipa capensis	.	.	.	.	43	17	.	8	.
C/D Poetea bulbosae									
Poa bulbosa	.	14	.	.	.	100	.	17	.
Erodium cicutarium	.	.	20	44	14	92	.	25	.
Sherardia arvensis	.	.	40	22	.	75	.	17	.

Vegetation type number	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**
Number of relevés	**1**	**7**	**5**	**9**	**7**	**12**	**1**	**12**	**23**
Carlina corymbosa subsp. *graeca*	.	.	.	11	14	75	.	.	.
Trifolium subterraneum	.	.	.	.	14	67	.	.	.
Taraxacum spec.	.	14	.	.	14	67	.	.	.
Dactylis glomerata subsp. *hispanica*	.	29	20	11	14	67	.	8	.
Sedum caespitosum	.	.	.	.	.	67	.	8	.
Bellardia latifolia	.	.	.	.	.	58	.	.	.
Calendula arvensis	.	.	.	.	.	58	.	.	.
Romulea bulbocodium	.	.	.	.	.	50	.	8	.
Echium plantagineum	.	.	.	22	14	58	.	.	.
Capsella bursa-pastoris	.	.	.	.	.	50	.	.	.
Bromus scoparius	.	.	.	.	14	50	.	.	.
Vulpia muralis	.	.	.	.	.	50	.	.	.
Geranium molle	.	.	.	.	.	50	.	.	.
Cerastium glomeratum	.	.	.	22	.	50	.	.	.
Alyssum umbellatum	.	29	.	11	.	50	.	.	.
Rumex pulcher	.	.	.	.	.	42	.	.	.
Astragalus pelecinus	.	.	.	.	.	42	*1000*	17	.
Myosotis ramosissima	.	.	.	11	.	42	.	.	.
Tordylium apulum	.	14	.	22	14	42	.	.	.
Hedypnois rhagadioloides subsp. *tubaeformis*	.	.	.	.	14	42	.	.	.
C/D Tuberarietea guttatae									
Vulpia fasciculata	.	.	.	.	.	.	*100*	8	26
Corynephorus articulatus	.	.	.	.	.	.	*100*	17	.
Andryala integrifolia	.	.	.	.	.	.	*100*	.	.
Anthoxanthum ovatum	.	.	.	.	.	.	*100*	.	.
Hypecoum procumbens	.	.	.	.	.	.	*100*	.	.
Tuberaria guttata	.	.	.	.	.	.	.	83	.
Hypericum olympicum	.	.	.	.	.	.	.	67	26
Tolpis umbellata	.	14	.	11	14	8	.	58	.
Linaria pelisseriana	.	.	.	22	.	8	.	42	.
Arenaria leptoclados	.	.	20	11	.	.	.	42	22
Saponaria jagelii	.	.	.	.	.	.	.	.	87
Malcolmia nana	.	.	.	.	.	.	.	.	52
Aetheorhiza bulbosa subsp. *bulbosa*	.	.	.	.	.	.	.	.	43
Lotus halophilus	.	.	.	.	.	.	.	8	30
Goniolimon incanum	.	.	.	.	.	.	.	.	30
Others (non-differential species)									
Hypochaeris glabra	.	.	.	22	14	58	*100*	92	.
Aira elegantissima	.	.	.	22	14	58	.	67	.
Plantago bellardii	.	.	20	11	14	50	.	75	.
Filago gallica	.	.	.	22	14	50	*100*	75	.
Trifolium arvense	.	.	.	11	.	33	*100*	58	.
Trifolium suffocatum	.	.	.	11	.	33	.	33	.
Crassula tillaea	.	.	.	.	.	33	.	33	.
Rostraria cristata	.	.	80	67	71	67	.	50	.
Trifolium campestre	.	.	80	33	57	58	*100*	50	.
Plantago weldenii	.	.	.	33	14	58	.	25	.
Rumex bucephalophorus subsp. *aegaeus*	.	.	.	33	29	67	.	75	43
Vulpia ciliata	.	.	20	44	29	50	.	83	.
Anagallis arvensis	.	.	40	44	29	58	.	50	9
Polycarpon tetraphyllum	.	14	.	22	43	58	*100*	42	39
Crepis commutata	.	.	.	44	43	17	.	.	.

Vegetation type number	20	21	22	23	24	25	26	27	28
Number of relevés	1	7	5	9	7	12	1	12	23
Cynodon dactylon	.	.	.	44	14	17	*100*	.	.
Hypochaeris radicata	.	57	.	11	.	42	*100*	8	4
Petrorhagia dubia	.	.	.	.	43	33	.	17	.
Trifolium stellatum	.	.	.	11	43	33	.	.	.
Avena barbata	.	43	.	.	29	42	*100*	.	4
Silene gallica	.	43	.	11	29	42	*100*	8	.
Eryngium campestre	.	.	.	11	43	50	.	8	.
Lagurus ovatus	.	.	20	56	71	50	.	8	4
Silene colorata	.	.	.	56	57	50	.	8	9
Plantago lagopus	.	.	40	44	71	100	*100*	.	.
Bromus tectorum	.	.	.	44	86	67	*100*	8	4
Filago pygmaea	.	.	.	22	14	42	.	.	.
Sagina apetala	.	.	.	11	29	33	.	17	.
Spergula arvensis	.	.	.	11	14	33	*100*	8	.
Trifolium uniflorum	.	14	.	33	.	33	.	.	.
Filago pyramidata	.	.	40	.	14	25	*100*	17	.
Asterolinon linum-stellatum	.	.	40	.	14	.	.	33	.
Catapodium rigidum	.	14	40	11	29	8	.	17	.
Galium murale	.	.	80	44	.	42	.	25	4
Psilurus incurvus	.	.	60	.	14	33	.	50	.
Valantia muralis	.	.	40	11	.	.	.	8	26
Sulla spinosissima	.	.	40	.	.	.	.	8	35
Bromus madritensis	.	43	.	11	.	8	.	.	.

Seaward strandline vegetation could be differentiated into that of sands (62) which is common and characterized by *Salsola squarrosa* and *Cakile maritima* or *Glaucium flavum*, and of vegetated shingle (46) which is rare on the island and typically with *Silene sedoides*, *Parapholis marginata* and *Catapodium marinum*.

The vegetation of coastal rocks and cliffs, mostly sandstone, with *Frankenia hirsuta* and *Limonium virgatum* (65; Figure 4a) was exposed to sea-spray, while *Brassica cretica* and *Matthiola incana* occurred on upper ledges and crevices of high cliffs (66). Halo-nitrophilous xeric grasslands on cliff-tops and marine embankments (23) were typical by a set of drought-resistant species including *Anthemis werneri* and *Medicago littoralis* (Figure 4b).

Rarely encountered but worth mentioning, was chasmophytic vegetation of inland rock or cliff crevices (21) with common plants such as *Umbilicus rupestris* and rare regional endemics such as *Campanula lavrensis*, *Polygonum icaricum* and *Verbascum rupestre*. Similar habitats but on damp rock by streams were characterized by *Adiantum capillus-veneris* (20).

Coastal saltmarsh and its hinterland showed extraordinarily diverse vegetation on Limnos. It consisted of various vegetation classes. That of annual succulent plants such as *Salicornia perennans* (32; Figure 4c), *Suaeda splendens* (31), *Salsola soda* (Figure 4h) and *Cressa cretica* (30; Figure 4e) varied depending on salinity and hydrology. Perennial succulent vegetation was found to be differentiated as rather dense stands on muddy substrates with *Halimione portulacoides* (Figure 4f) and species of *Sarcocornia* (33), and of more open ones on deep wet-dry sandy ground with *Halocnemum strobilaceum* (34; Figure 4g). Eroded or grazed saltmarsh, where pronouncedly saline, was dominated by prostrate grasses (*Aeluropus littoralis*, *Puccinellia festuciformis*) (35). The most extensive stands of seasonally flooded rush saltmarsh were found at the lagoon of Aliki, but also elsewhere in flat coastal sites such as estuaries. They could be differentiated in rhizomatous rush reeds of *Juncus maritimus* (36) and *Juncus subulatus* (37), and densely caespitose mixed ones with *Juncus acutus*, *Juncus heldreichianus* and *Juncus littoralis* (39), the latter type was locally found also in inland wetlands (Figure 5b). Landward, with decreasing salinity and increasingly dry alkaline conditions, coastal sands were dominated by *Schoenus nigricans* (40; Figure 5a) or, never flooded but groundwater-influenced, by *Imperata cylindrica* (41; Figure 5c). On wet-dry silty ground, the plants formed dense swards which were usually species-rich and productive (Figure 5d). *Carex divisa*, *Oenanthe silaifolia*, *Ranunculus marginatus* and several *Trifolium* species prevailed (42, 43). Interspersed in saltmarsh, usually non-extensive and benefitting from seasonal winter and spring rain, are spring ephemeral annual grass patches with abundant *Hordeum geniculatum* (44), *Polypogon maritimus* and *Polypogon subspathaceus* (45) and *Crypsis aculeata* (47), the latter very rarely encountered.

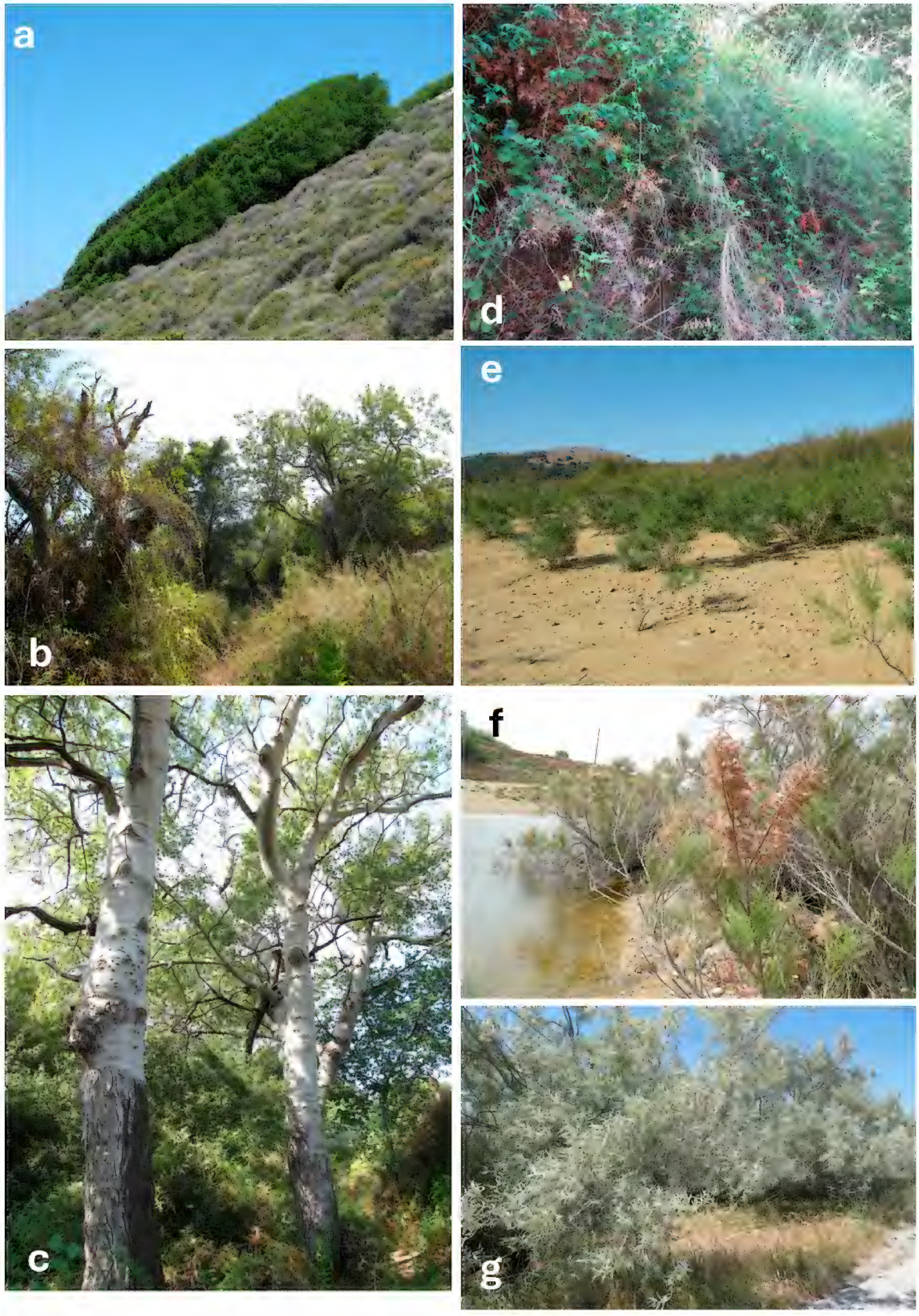

Figure 2. Rarely photographed types of woody vegetation on Lemnos. (a) Wind pruned *Quercus coccifera* macchia (*Quercion calliprini*); (b) Abandoned pastoral forest of *Quercus ithaburensis* subsp. *macrolepis* (*Quercion macrolepidis*); (c) Riparian forest with *Populus alba* (*Lauro nobilis-Fraxinion angustifoliae*); (d) *Rosa sempervirens*, *Rubus sanctus* and *Asparagus acutifolius* scrambling at the edge of a riparian forest; (e) Reservoir shore with scrub of *Vitex agnus-castus* and tamarisks (*Rubo sancti-Nerion oleandri*); (f) *Tamarix smyrnensis* riparian scrub; (g) *Elaeagnus angustifolia* grove. Photos by Ute Bergmeier and Erwin Bergmeier, 2021 and 2025.

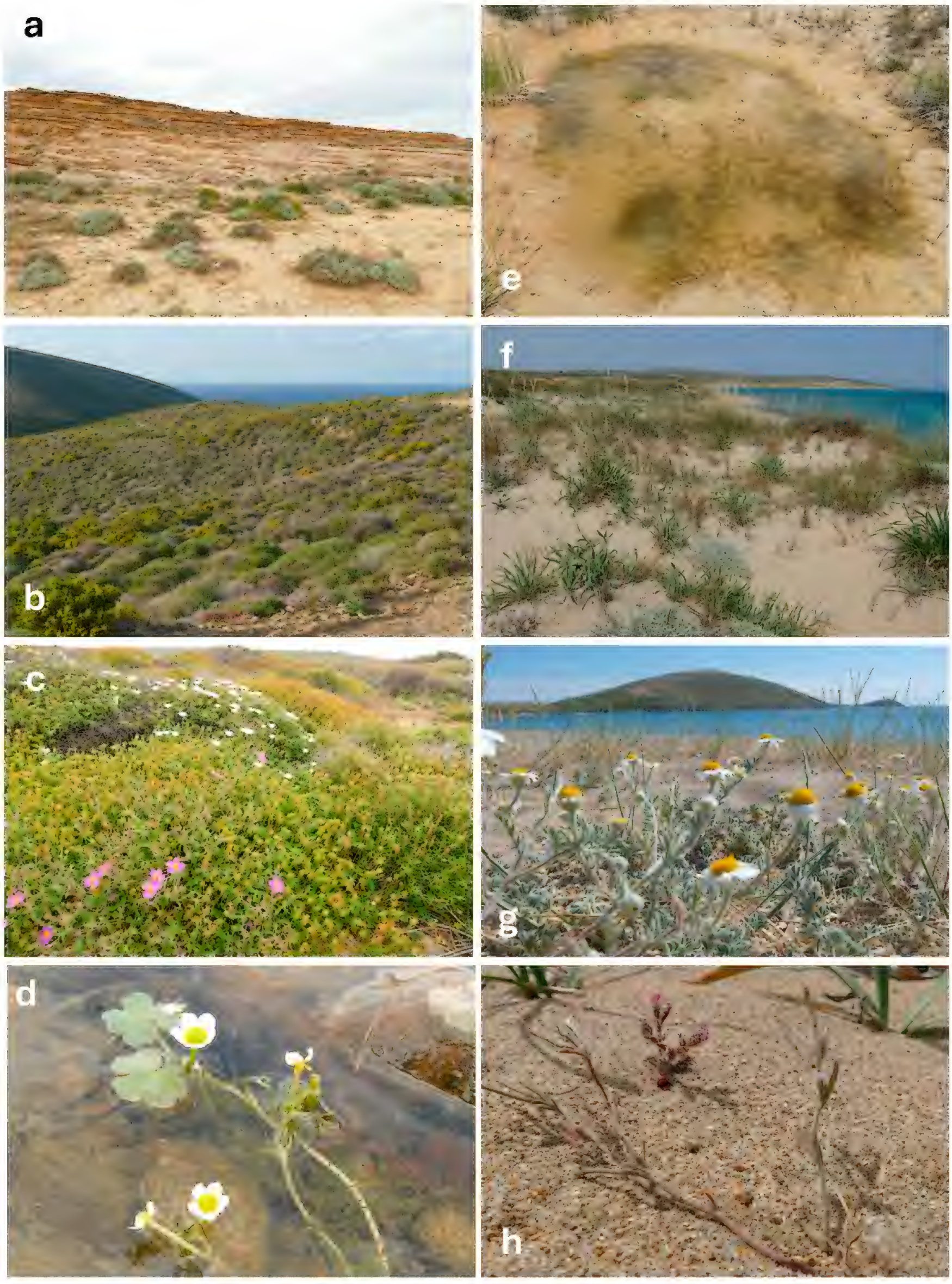

Figure 3. Rarely photographed vegetation types of phrygana, aquatic and dune habitats in Lemnos. (a) Wind-exposed *Centaurea spinosa* cushions on coastal sands (*Medicagini marinae-Centaureetum spinosae*); (b) Phrygana with *Anthyllis hermanniae* and *Thymbra capitata* (*Helichryso barrelieri-Phagnalion graeci*); (c) Phrygana with *Cistus creticus* (pink) and *Cistus salviifolius* (white) (*Calicotomo-Cistetum cretici*); (d) The aquatic plant *Ranunculus saniculifolius* tolerates wet soils falling dry (*Ranunculo saniculifolii-Callitrichetum brutiae*); (e) Dune slack with pool inhabited by *Charetum galioidis*; (f) Dune with *Ammophila arenaria* subsp. *australis* and *Pancratium maritimum* (*Medicagini marinae-Ammophiletum arundinaceae*); (g) Nutrient-enriched coastal sands with *Anthemis tomentosa* (*Centaureo cuneifoliae-Verbascion pinnatifidi*); (h) *Malcolmia nana* and *Saponaria jagelii* in patches of base-rich backdune sands (*Maresion nanae*). Photos by Ute Bergmeier, 2025.

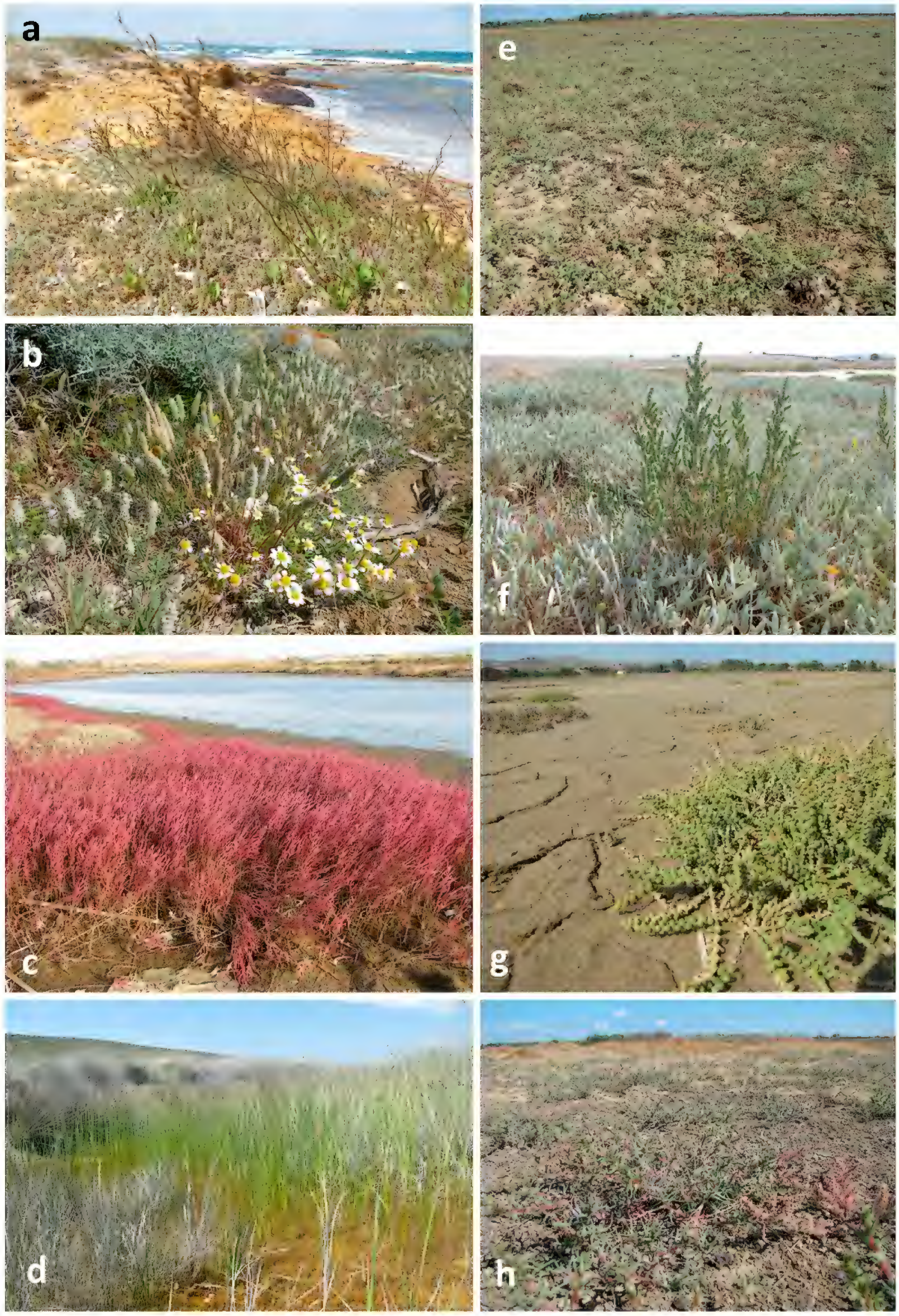

Figure 4. Rarely photographed vegetation types of coastal and saltmarsh habitats. (a) Coastal rock with *Frankenia hirsuta* and *Limonium virgatum* (*Crithmo-Limonietum virgati*); (b) Coastal habitat with saline-tolerant annual vegetation of *Anthemis werneri* and *Phleum exaratum* subsp. *aegaeum* (*Plantagini-Catapodion marini*); (c) Markedly saline edge of lagoon with *Salicornia perennans* (*Suaedo maritimae-Bassietum hirsutae*); (d) Wet dune slack with *Schoenoplectus litoralis* (*Scirpetum litoralis*); (e) Brackish saltmarsh with *Cressa cretica* (*Cressetum creticae*); (f) Saltmarsh gully edge with *Halimione portulacoides* and *Sarcocornia fruticosa* (*Halimionetum portulacoidis*); (g) Mud-sandy saline flat with *Halocnemum strobilaceum* (*Arthrocnemo glauci-Halocnemetum strobilacei*); (h) Nutrient-rich saltmarsh with *Salsola soda* and *Suaeda splendens* (*Salsolo sodae-Suaedetum splendentis*). Photos by Ute Bergmeier and Erwin Bergmeier, 2021 and 2025.

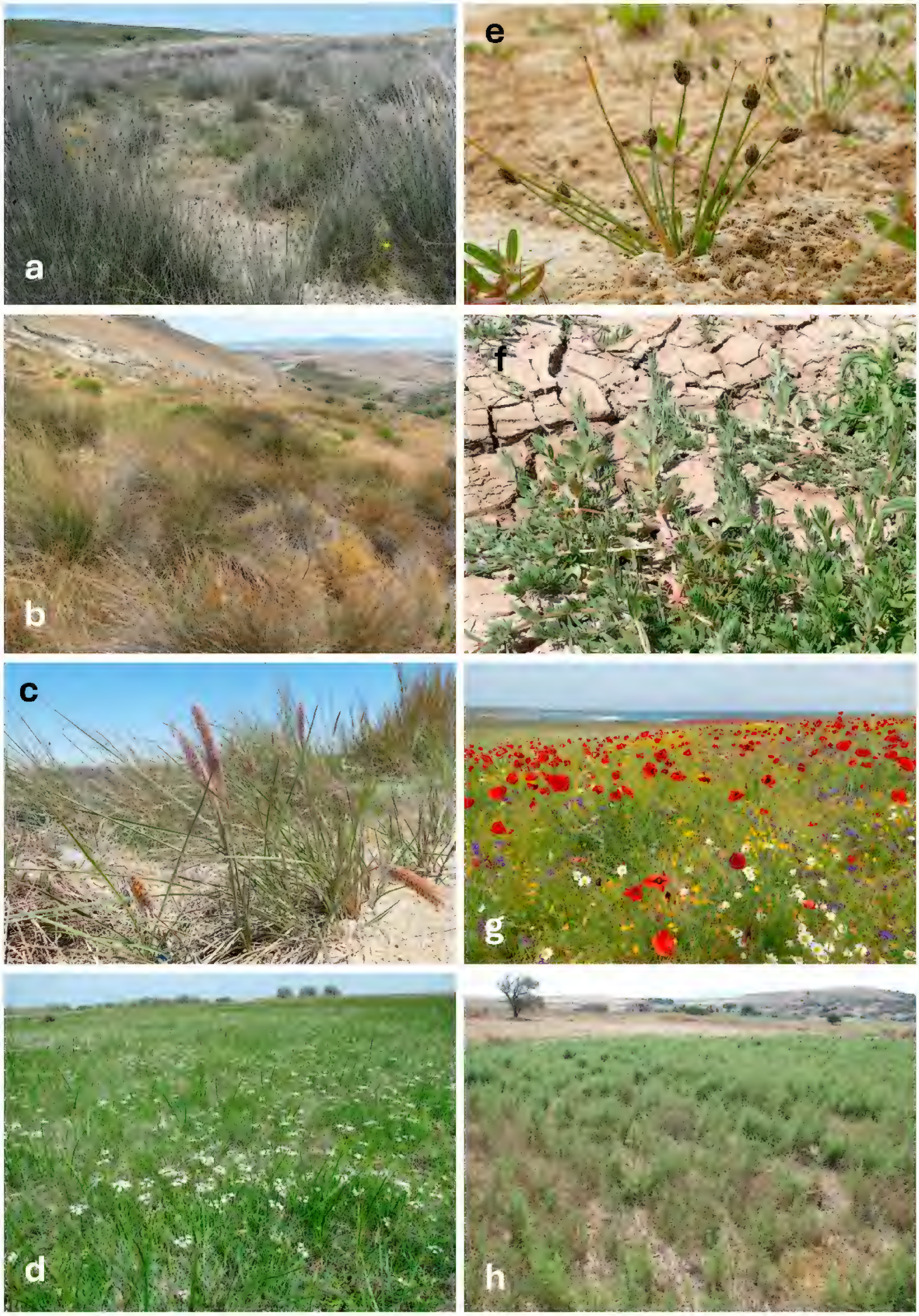

Figure 5. Rarely photographed vegetation types of wet-dry habitats and arable fields. (a) Lagoon edge vegetation on base-rich sandy flat dominated by *Schoenus nigricans* (*Schoeno-Plantaginetum maritimae*); (b) Rush tussocks of *Juncus heldreichianus* at hillside spring; (c) Groundwater-influenced dry sandy flat dominated by *Imperata cylindrica* (*Equiseto ramosissimi-Imperatetum cylindricae*); (d) Wet-dry subsaline meadow with *Oenanthe silaifolia* (*Ranunculo marginati-Caricetum divisae*); (e) Just dried-up pond bank with *Isolepis cernua* (*Preslion cervinae*); (f) Dried-up field edge with *Lythrum tribracteatum*, *Lythrum hyssopifolium* and *Pulicaria vulgaris* (*Lythrion tribracteati*); (g) Rotational fallow with *Papaver rhoeas*, *Hypecoum imberbe*, *Anchusa undulata* subsp. *hybrida*, *Anthemis auriculata*; (h) Late-summer stubble field with *Dittrichia graveolens* (*Diplotaxion erucoidis*). Photos by Ute Bergmeier and Erwin Bergmeier, 2021 and 2025.

Table 3. Plant communities of coastal, saltmarsh, wetland and wet-dry habitats on the island of Lemnos. 29, *Ruppion maritimae*; 30, 31, 32, *Therosalicornion*; 33, *Salicornion fruticosae*; 34, *Arthrocnemion glauci*; 35, *Puccinellion convolutae*; 36, 37, 39, *Juncion maritimi*; 38, *Agropyrion pungentis*; 40, *Agropyro-Plantaginion maritimi*; 41, *Molinio-Holoschoenion*; 42, 43, *Trifolion maritimi*; 44, *Frankenion pulverulentae*; 45, *Romuleo-Saginion*; 46, *Sileno sedoidis-Catapodion loliacei*; 47, *Cypero-Spergularion salinae*; 48, 49, *Scirpion maritimi*; 50, 54, *Phragmition communis*; 51, *Imperato cylindricae-Saccharion ravennae*; 52, *Saccharetalia ravennae*; 53, *Eleocharito palustris-Sagittarion sagittifoliae*; 55, *Glycerio-Sparganion*; 56, *Dorycnio recti-Rumicion conglomerati*; 57, *Charion canescentis*; 58, *Ranunculion aquatilis*; 59, *Preslion cervinae*; 60, *Lythrion tribracteati*; 61, *Verbenion supinae*; 62, *Euphorbion peplidis*; 63, *Centaureo cuneifoliae-Verbascion pinnatifidi*; 64, *Ammophilion arundinaeae*; 65, *Crithmo-Frankenion hirsutae*; 66, *Crucianellion rupestris*. C/D, characteristic or differential species. The C/D species are indicative for the given syntaxon or its subordinate syntaxa. The frequency (constancy) figures for vegetation types are percentages, those with <5 relevés in italics to indicate potentially lesser diagnostic reliability. Species with <30% constancy in any column (vegetion type) are omitted (except for few species considered diagnostic). An unabridged synoptic table and a full table with all relevés can be found in Suppl. material 3 and Suppl. material 7, respectively.

Vegetation type number	**29**	**30**	**31**	**32**	**33**	**34**	**35**	**36**	**37**	**38**	**39**	**40**	**41**	**42**	**43**	**44**	**45**	**46**	**47**	**48**	**49**	**50**	**51**	**52**	**53**	**54**	**55**	**56**	**57**	**58**	**59**	**60**	**61**	**62**	**63**	**64**	**65**	**66**
Nunber of relevés	**1**	**3**	**3**	**7**	**10**	**5**	**5**	**6**	**4**	**1**	**17**	**10**	**9**	**23**	**13**	**6**	**19**	**1**	**2**	**8**	**1**	**4**	**2**	**1**	**2**	**3**	**2**	**4**	**1**	**3**	**6**	**16**	**1**	**15**	**1**	**21**	**13**	**1**
C Ruppietea maritimae																																						
Ruppia maritima	*100*	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
C Therosalicornietea																																						
Cressa cretica	.	*100*	.	.	.	.	.	.	.	.	.	.	.	4	.	.	.	.	.	25	.	.	.	.	.	.	.	.	.	.	.	.	.	13	.	.	.	.
Salsola soda	.	*67*	*100*	.	.	.	40	.	.	.	.	.	.	4	.	.	.	.	.	25	.	.	.	.	.	.	.	.	.	.	.	.	.	7	.	.	.	.
Suaeda splendens	.	.	*100*	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Salicornia perennans	.	.	.	100	30	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
C Salicornietea fruticosae																																						
Halimione portulacoides	.	.	.	43	70	.	.	33	.	.	6	.	.	4	.	.	.	.	.	13	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Sarcocornia perennis	.	.	.	43	40	40	.	17	.	.	.	.	.	.	.	.	5	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Sarcocornia fruticosa	.	.	.	.	30	20	.	.	.	.	.	.	.	4	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Halocnemum strobilaceum	.	.	.	.	.	100	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
C/D Festuco-Puccinellietea																																						
Aeluropus littoralis	.	.	*33*	.	10	.	100	33	.	.	.	20	.	17	.	.	.	.	*50*	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Puccinellia festuciformis	.	.	.	.	10	.	40	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	8	.
Crepis setosa	.	.	.	.	.	.	40	.	.	.	.	10	.	13	15	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
C/D Juncetea maritimi																																						
Juncus maritimus	.	.	.	.	20	.	.	100	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Carex extensa	.	.	.	.	.	.	.	33	.	.	.	20	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Juncus subulatus	.	.	.	.	.	.	.	.	*100*	.	.	.	.	4	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Elytrigia atherica	.	.	.	.	.	.	.	.	.	*100*	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Juncus heldreichianus	.	.	.	.	.	.	.	17	.	.	65	40	.	4	.	.	.	.	.	.	.	.	.	.	.	*33*	.	.	.	.	.	.	.	.	.	.	.	.
Juncus acutus	.	.	.	.	10	.	.	17	*25*	.	41	10	.	9	15	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Schoenus nigricans	.	.	.	.	.	.	.	17	.	.	.	100	.	.	.	.	.	.	.	.	.	.	*50*	.	.	.	.	.	.	.	.	.	.	.	5	.	.	.
Dittrichia viscosa	.	.	.	.	.	.	.	33	.	.	29	80	.	13	23	.	.	.	.	.	.	*50*	.	.	.	.	*50*	.	.	.	6	.	.	.	.	8	.
Blackstonia perfoliata	.	.	.	.	.	.	.	.	.	.	.	30	.	.	.	.	5	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
C/D Holoschoenetalia																																						
Imperata cylindrica	.	.	.	.	.	.	.	.	.	.	12	10	100	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	14	.	.	.
Scirpoides holoschoenus subsp. *australis*	.	.	.	.	.	.	.	.	.	.	65	30	56	13	8	.	.	.	.	.	.	.	*50*	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Vegetation type number	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66
Nunber of relevés	1	3	3	7	10	5	5	6	4	1	17	10	9	23	13	6	19	1	2	8	1	4	2	1	2	3	2	4	1	3	6	16	1	15	1	21	13	1
Euphorbia niciciana	.	.	.	.	.	.	.	.	.	.	12	20	56	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	5	.	.
Rumex bucephalophorus subsp. *aegaeus*	.	.	.	.	.	.	.	.	.	.	6	.	44	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	7	.	.	.	.
Lagurus ovatus	.	.	.	.	.	.	.	.	.	.	12	10	44	.	23	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	7	.	.	.	.
Hypochaeris radicata	.	.	.	.	.	.	.	.	.	.	6	.	44	.	23	33	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Vulpia ciliata	.	.	.	.	.	.	.	.	.	.	.	.	33	.	8	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Tuberaria guttata	.	.	.	.	.	.	.	.	.	.	.	.	33	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Briza maxima	.	.	.	.	.	.	.	.	.	.	6	.	33	.	23	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Hypericum olympicum	.	.	.	.	.	.	.	.	.	.	.	10	33	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	5	.	.
Avena barbata	.	.	.	.	.	.	.	.	.	.	6	.	33	.	31	17	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	7	.	.	.	.
Alkanna tinctoria	.	.	.	.	.	.	.	.	.	.	6	.	33	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	10	.	.
Trifolium arvense	.	.	.	.	.	.	.	.	.	.	.	.	33	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Hypochaeris glabra	.	.	.	.	.	.	.	.	.	.	.	10	33	.	8	17	16	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Oenanthe pimpinelloides + *silaifolia*	.	.	.	.	.	.	20	17	*50*	.	12	.	.	83	69	17	.	.	.	25	.	*25*	.	.	*50*	*33*	.	.	.	.	.	6	.	.	.	.	.	.
Poa trivialis	.	.	.	.	.	.	.	.	.	*100*	.	.	.	52	85	17	.	.	.	.	.	.	.	.	.	.	*50*	*25*	.	.	.	13	.	.	.	.	.	.
Ranunculus sardous agg.	.	.	.	.	.	.	.	.	.	.	.	.	.	48	62	17	5	.	.	13	.	.	.	.	*50*	*33*	.	.	.	.	.	63	.	.	.	.	.	.
Carex divisa	.	.	.	.	.	.	.	.	.	.	.	.	.	43	46	.	.	.	.	25	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Trifolium echinatum	.	.	.	.	.	.	20	.	.	.	6	.	.	26	54	17	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Melilotus sulcatus	.	.	.	.	.	.	40	.	.	.	.	.	.	30	23	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	6	.	.	.	.	.	.
Geranium dissectum	.	.	.	.	.	.	.	.	.	.	.	.	.	26	77	17	.	.	.	.	.	.	.	.	.	.	.	.	.	.	17	.	.	.	.	.	.	.
Bromus hordeaceus	.	.	.	.	.	.	.	.	.	.	.	.	11	13	54	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Trifolium michelianum	.	.	.	.	.	.	.	.	.	.	.	.	.	4	46	17	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Vicia parviflora	.	.	.	.	.	.	.	.	.	.	.	.	.	.	38	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Gaudinia fragilis	.	.	.	.	.	.	.	.	.	.	.	.	.	4	31	17	5	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Trifolium resupinatum	.	.	.	.	.	.	.	.	.	.	.	.	.	9	31	33	21	.	.	.	.	.	.	.	.	.	.	.	.	.	.	6	.	.	.	.	.	.
Trifolium petrisavii	.	.	.	.	.	.	.	.	.	.	.	.	.	.	54	67	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Trifolium campestre	.	.	.	.	.	.	.	.	.	.	6	.	11	4	77	67	11	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	7	.	.	.	.
Melilotus indicus	.	.	.	.	.	.	.	.	.	.	.	.	.	13	38	33	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	25	.	.	.	.	.	.
Medicago polymorpha	.	.	.	.	.	.	.	.	.	.	.	.	.	4	38	33	5	.	.	.	.	.	.	.	.	.	.	.	.	.	.	6	.	.	.	.	.	.
Silene gallica	.	.	.	.	.	.	.	.	.	.	.	.	.	.	31	33	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Trifolium globosum	.	.	.	.	.	.	.	.	.	.	.	.	.	.	15	33	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
C/D Saginetea maritimae																																						
Hordeum geniculatum	.	.	.	.	.	20	.	.	.	.	.	.	.	30	23	100	26	.	.	.	.	.	.	.	.	.	.	.	.	.	.	13	.	.	.	.	.	.
Lolium rigidum	.	.	.	.	.	.	.	.	.	.	.	.	.	30	31	83	21	.	.	.	.	.	.	.	.	.	.	*50*	.	.	17	75	.	13	*1*	.	.	.
Holcus annuus	.	.	.	.	.	.	.	.	.	.	.	.	22	4	23	50	5	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Plantago lagopus	.	.	.	.	.	.	.	.	.	.	.	.	.	.	15	50	5	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Trifolium tomentosum	.	.	.	.	.	.	.	.	.	.	.	.	.	.	15	50	21	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Hainardia cylindrica	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	33	16	.	.	.	.	.	.	.	.	.	.	.	.	.	17	6	.	.	.	.	.	.
Leontodon longirostris	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	33	11	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Lotus subbiflorus	.	.	.	.	.	.	.	.	.	.	.	.	11	.	.	33	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Vegetation type number	**29**	**30**	**31**	**32**	**33**	**34**	**35**	**36**	**37**	**38**	**39**	**40**	**41**	**42**	**43**	**44**	**45**	**46**	**47**	**48**	**49**	**50**	**51**	**52**	**53**	**54**	**55**	**56**	**57**	**58**	**59**	**60**	**61**	**62**	**63**	**64**	**65**	**66**
Nunber of relevés	**1**	**3**	**3**	**7**	**10**	**5**	**5**	**6**	**4**	**1**	**17**	**10**	**9**	**23**	**13**	**6**	**19**	**1**	**2**	**8**	**1**	**4**	**2**	**1**	**2**	**3**	**2**	**4**	**1**	**3**	**6**	**16**	**1**	**15**	**1**	**21**	**13**	**1**
Spergularia bocconei	.	.	.	.	10	.	.	.	.	.	.	.	.	.	.	.	74	.	.	.	.	.	.	.	.	.	.	.	.	.	.	31	.	.	.	.	.	.
Polypogon maritimus + subspathaceus	.	.	.	.	.	.	20	.	.	.	.	.	.	9	8	17	68	*100*	*50*	13	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Hordeum marinum	.	.	.	.	.	.	40	.	.	.	.	.	.	22	8	17	37	.	.	13	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Silene sedoides	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	*100*	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	23	.
Silene colorata	.	.	.	.	.	.	.	.	.	.	6	.	11	.	.	.	.	*100*	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	*100*	.	.	.
Holosteum umbellatum	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	*100*	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	8	.
Bromus intermedius	.	.	.	.	.	.	.	.	.	.	.	.	.	.	8	33	.	*100*	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Frankenia pulverulenta	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	*100*	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Parapholis marginata	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	*100*	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Catapodium marinum	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	*100*	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	8	.
C/D Crypsietea aculeatae																																						
Crypsis aculeata	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	*100*	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Lepidium coronopus	.	.	.	.	.	.	.	.	.	.	.	.	.	4	.	.	.	.	*50*	.	.	.	.	.	.	.	.	.	.	.	.	17	19	.	.	.	.	.	.
Atriplex prostrata	.	.	.	.	.	.	.	.	.	.	12	.	.	.	.	17	.	.	*50*	.	.	.	.	.	.	.	.	.	.	.	.	17	.	.	7	.	.	.	.
C/D Phragmito-Magnocaricetea																																						
Bolboschoenus maritimus	.	2	.	.	.	.	.	.	.	.	.	.	.	9	.	.	.	.	.	100	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Schoenoplectus litoralis	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	*100*	.	.	.	.	.	.	.	.	.	.	.	.	.	.	5	.	.
Phragmites australis	.	.	.	.	.	.	.	.	.	*100*	6	10	.	.	.	.	.	.	.	.	*100*	*100*	*50*	.	.	.	.	.	.	.	.	.	.	7	.	.	.	.
Cynanchum acutum	.	.	.	.	.	.	.	.	.	*100*	35	.	11	9	.	.	.	.	.	.	.	*50*	*50*	.	.	*33*	*50*	*25*	.	.	.	.	.	.	.	9	.	.
Tripidium ravennae	.	.	.	.	.	.	.	.	.	.	.	30	.	.	.	.	.	.	.	.	.	.	*50*	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Saccharum spontaneum	.	.	.	.	.	.	.	.	.	.	.	10	.	.	.	.	.	.	.	.	.	.	*50*	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Corynephorus articulatus	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	*50*	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Arundo donax	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	*100*	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Eleocharis palustris	.	.	.	.	.	.	.	.	.	.	.	.	.	9	.	.	.	.	*100*	.	.	.	.	.	.	.	.	.	.	.	33	.	.	.	.	.	.	.
Bolboschoenus glaucus	.	.	.	.	.	.	.	.	.	.	.	.	.	9	.	.	.	.	*50*	*67*	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Typha domingensis	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	*100*	*50*	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cyperus longus subsp. *longus*	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	*33*	*50*	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Mentha aquatica	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	*33*	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Carex otrubae	.	.	.	.	.	.	.	.	.	.	.	.	.	9	15	.	.	.	.	*33*	*50*	*25*	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Berula erecta	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	*100*	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Matricaria chamomilla	.	.	.	.	.	.	.	.	.	.	.	.	.	.	8	.	5	.	.	.	*50*	.	.	.	.	.	.	.	.	.	.	.	31	.	.	.	.	.
C/D Convolvuletalia sepium																																						
Rumex conglomeratus	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	*50*	*33*	*50*	*25*	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Epilobium hirsutum	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	*67*	*100*	*75*	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Rumex cristatus	.	.	.	.	.	.	.	.	.	.	6	.	.	9	.	.	.	.	.	*33*	*50*	*50*	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Melissa officinalis	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	*50*	*75*	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Pulicaria dysenterica	.	.	.	.	.	.	.	.	.	.	6	.	.	.	.	.	.	.	.	.	.	*100*	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Equisetum ramosissimum	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	*33*	*50*	*50*	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Vegetation type number	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66
Nunber of relevés	1	3	3	7	10	5	5	6	4	1	17	10	9	23	13	6	19	1	2	8	1	4	2	1	2	3	2	4	1	3	6	16	1	15	1	21	13	1
C Charetea intermediae																																						
Chara galioides	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	*100*	.	.	.	.	.	.	.	*100*	*100*	.	.	.	.	.	.	.	.
C Potamogetonetea																																						
Zannichellia palustris	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	*100*	.	.	.	.	.	.	.	.
Ranunculus rionii	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	*67*	.	.	.	.	.	.	.	.
Myriophyllum spicatum	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	*33*	.	.	.	.	.	.	.	.
Ranunculus saniculifolius	.	.	.	.	.	.	.	.	.	.	.	.	.	4	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	*100*	83	.	.	.	.	.	.	.
C/D Isoëto-Nanojuncetea																																						
Isolepis cernua	.	.	.	.	.	.	.	.	.	.	.	.	.	4	.	.	26	.	.	.	.	.	.	.	.	.	.	.	.	.	67	.	.	.	.	.	.	.
Xanthium orientale subsp. *italicum*	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	*33*	.	.	.	.	33	6	.	.	.	9	.	.
Mentha pulegium	.	.	.	.	.	.	.	.	.	.	.	.	.	22	15	17	11	.	.	.	.	.	.	.	*50*	.	.	.	.	.	33	6	.	.	.	.	.	.
Lythrum hyssopifolium + tribracteatum	.	.	.	.	.	.	.	.	.	.	.	.	.	4	.	17	37	.	.	.	.	.	.	.	.	.	.	.	.	.	50	94	.	.	.	.	.	.
Juncus bufonius	.	.	.	.	.	.	.	.	.	.	.	.	.	4	8	.	47	.	.	.	.	.	.	.	.	.	.	.	.	.	17	88	.	.	.	.	.	.
Anthemis cotula	.	.	.	.	.	.	.	.	.	.	.	.	.	.	23	17	.	.	.	.	.	.	.	.	.	.	*50*	.	.	.	.	75	.	.	.	.	.	.
Polygonum aviculare	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	17	63	.	.	.	.	.	.
Pulicaria vulgaris	.	.	.	.	.	.	.	.	.	.	.	.	.	4	.	.	5	.	.	.	.	.	.	.	.	.	.	.	.	.	17	44	.	.	.	.	.	.
Ranunculus muricatus	.	.	.	.	.	.	.	.	.	.	.	.	.	13	.	17	5	.	.	.	.	.	.	.	.	.	*50*	.	.	.	50	44	.	.	.	.	.	.
Glinus lotoides	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	*100*	.	.	.	.	.
Cyperus michelianus subsp. *pygmaeus*	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	*100*	.	.	.	.	.
Heliotropium supinum	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	*100*	.	.	.	.	.
Chrozophora tinctoria	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	*100*	.	.	.	.	.
Abutilon theophrasti	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	*100*	.	.	.	.	.
C Cakiletea maritimae																																						
Salsola squarrosa	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	67	.	33	.	.	.	.	.
Cakile maritima	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	60	.	24	.	.	.	.	.
Matthiola tricuspidata	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	33	*100*	10	.	.	.	.	.
C/D Ammophiletea arundinaceae																																						
Medicago littoralis	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	*100*	10	.	.	.	.	.
Anthemis tomentosa	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	*100*	.	.	.	.	.	.
Verbascum pinnatifidum	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	*100*	10	.	.	.	.	.
Allium sphaerocephalon	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	*100*	.	.	.	.	.	.
Medicago marina	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	*100*	19	.	.	.	.	.
Pancratium maritimum	.	.	.	.	.	.	.	.	.	.	.	.	11	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	13	.	95	8	.	.	.	.
Ammophila arenaria subsp. *australis*	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	76	.	.	.	.	.
Achillea maritima	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	67	.	.	.	.	.
Elytrigia juncea	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	13	*100*	62	.	.	.	.	.
Sporobolus pungens	.	.	.	.	.	.	.	.	.	.	.	20	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	13	*100*	48	8	.	.	.	.
Eryngium maritimum	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	13	.	48	.	.	.	.	.

Vegetation type number	**29**	**30**	**31**	**32**	**33**	**34**	**35**	**36**	**37**	**38**	**39**	**40**	**41**	**42**	**43**	**44**	**45**	**46**	**47**	**48**	**49**	**50**	**51**	**52**	**53**	**54**	**55**	**56**	**57**	**58**	**59**	**60**	**61**	**62**	**63**	**64**	**65**	**66**
Nunber of relevés	**1**	**3**	**3**	**7**	**10**	**5**	**5**	**6**	**4**	**1**	**17**	**10**	**9**	**23**	**13**	**6**	**19**	**1**	**2**	**8**	**1**	**4**	**2**	**1**	**2**	**3**	**2**	**4**	**1**	**3**	**6**	**16**	**1**	**15**	**1**	**21**	**13**	**1**
Polygonum maritimum	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	7	.	43	.	.
Aetheorhiza bulbosa subsp. *bulbosa*	.	.	.	.	.	.	.	17	.	.	.	20	11	.	.	.	.	.	.	.	.	.	*1*	.	.	.	.	.	.	.	.	.	.	7	.	38	.	.
Calystegia soldanella	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	33	.	.
Centaurea spinosa	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	7	.	48	31	.
C/D Crithmo-Limonietea																																						
Frankenia hirsuta	.	.	.	.	.	.	20	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	85	.
Limonium virgatum	.	.	.	.	10	.	.	.	.	.	.	20	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	7	.	10	77	.
Crithmum maritimum	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	7	.	.	38	.
Lotus cytisoides	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	*100*	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	7	.	.	38	.
Brassica cretica	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	*100*
Matthiola incana	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	*100*
Rumex tuberosus subsp. *creticus*	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	*100*
Others (non-differential species)																																						
Plantago coronopus + *weldenii*	.	.	.	.	10	.	40	.	.	.	.	10	.	4	15	50	79	.	.	.	.	.	.	.	.	.	.	.	.	.	.	6	.	.	.	.	8	.
Cynodon dactylon	.	.	.	.	.	.	.	17	.	.	18	10	11	4	8	33	32	.	.	.	.	.	.	.	.	.	.	*25*	.	.	.	6	.	20	*100*	.	8	.
Rubus sanctus	.	.	.	.	.	.	.	.	.	.	.	20	.	.	.	.	.	.	.	.	.	*25*	*50*	.	.	*33*	.	*50*	.	.	.	.	.	.	.	5	.	.
Hypericum triquetrifolium	.	.	.	.	.	.	.	.	.	.	.	.	33	.	.	.	.	.	.	.	.	.	*50*	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Asphodelus ramosus	.	.	.	.	.	.	.	.	.	.	6	20	33	.	.	.	.	.	.	.	.	.	*50*	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Anagallis arvensis	.	.	.	.	.	.	.	.	.	.	12	10	44	.	54	50	32	.	.	.	.	.	*50*	.	.	.	.	.	.	.	17	56	.	.	.	.	8	.
Daucus carota	.	.	.	.	.	.	.	.	.	.	6	20	11	4	8	.	.	.	.	.	.	.	.	.	.	.	.	*50*	.	.	.	.	.	.	.	.	.	.
Cladanthus mixtus	.	.	.	.	.	.	.	.	.	.	.	.	11	.	15	33	5	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	7	.	.	.	.
Sarcopoterium spinosum	.	.	.	.	.	.	.	.	.	.	6	30	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Lolium perenne	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	33	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Beta vulgaris subsp. *maritima*	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	33	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	20	.	.	.	.
Spergula arvensis	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	33	5	.	.	.	.	.	.	.	.	.	.	.	.	.	.	6	.	.	.	.	.	.
Lepidium draba	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	33	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Rumex pulcher	.	.	.	.	.	.	.	.	.	.	.	.	.	9	31	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	17	25	.	.	.	.	.	.
Convolvulus arvensis	.	.	.	.	.	.	.	.	.	.	12	.	.	9	31	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Ornithopus compressus	.	.	.	.	.	.	.	.	.	.	.	.	.	.	8	33	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Anthoxanthum ovatum	.	.	.	.	.	.	.	.	.	.	.	.	11	.	8	33	16	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Urospermum picroides	.	.	.	.	.	.	.	.	.	.	.	.	.	.	38	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	7	.	5	.	.
Vicia lutea	.	.	.	.	.	.	.	.	.	.	.	.	.	9	38	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	13	.	.	.	.	.	.
Trifolium subterraneum	.	.	.	.	.	.	.	.	.	.	.	.	.	.	8	33	5	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cerastium glutinosum	.	.	.	.	.	.	.	.	.	.	.	.	.	.	8	33	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Wet-dry inland sites drying out in early spring may produce vernal vegetation of tiny plants on the banks of pools or streams (59) with, among others, *Isolepis cernua* (Figure 5e), on wet fields with annual *Lythrum* and *Juncus* species as well as *Pulicaria vulgaris*, (60; Figure 5f), and when drying off in late spring, aestival vegetation with *Glinus lotoides* and *Cyperus michelianus* subsp. *pygmaeus* (61), encountered on the banks of a reservoir. Local tall-graminoid reeds and permanent wetlands embedded in various landscape settings occurred with *Bolboschoenus maritimus* by lagoons and saltmarsh ditches (48), in a dune slack with *Schoenoplectus litoralis* (49; Figure 4d), at the edges of ponds and in valleys with *Phragmites australis* (50) and *Typha domingensis* (54), in freshwater-fed hindshore slacks with *Tripidium ravennae* (51), in groundwater areas between fields with *Arundo donax* (52), as small reed in swampy sites with *Eleocharis palustris* (53) and along permanent streams and ditches with tall helophytes such as *Berula erecta* (55) and *Epilobium hirsutum*, *Carex otrubae* and *Pulicaria dysenterica* (56).

Strictly anthropogenic vegetation almost equalled the high numbers of different coastal, saltmarsh and wetland vegetation types. Arable fields grown with cereals or pulses were found as the habitats of three species-rich vegetation types (92, 93, 94) with wild arable plants such as *Rapistrum rugosum*, *Scandix pecten-veneris*, *Anthemis cotula*, *Sinapis arvensis*, *Papaver rhoes*, *Raphanus raphanistrum* and *Glebionis segetum* (Figure 5g). The vegetation types differed in characteristics of soil and species composition. The autumnal vegetation of stubble fields was characterized by summer annuals such as *Heliotropium europaeum* and *Dittrichia graveolens* (75; Figure 5h). Similar was the vegetation of irrigated summer crops and gardens (76), which were rich in species of *Amaranthus*, *Chenopodium*, *Solanum* and *Xanthium*.

A large number of ruderal vegetation types in villages, on nutrient-rich pastures and by farms, were also associated with agricultural activities, specifically livestock farming. The sheep-grazed herbaceous pastures on loamy soils supported low-grown dense grasslands with *Poa bulbosa* (25), on more sparsely vegetated xeric rocky and sandy ground with *Limonium sinuatum* (24; Figure 6a) and near the coast with *Asteriscus aquaticus* (22). On sandy, unproductive soils occurred sparse annual-rich vegetation with *Tuberaria guttata*, *Hypochaeris glabra*, *Tolpis umbellata* and *Rumex bucephalophorus* subsp. *aegaeus* (27) or more rarely with *Corynephorus articulatus*, *Vulpia fasciculata*, *Andryala integrifolia* and *Hypericum olympicum* (26; Figure 6b).

Overgrazed pastures, or formerly so and then abandoned (87, 88), were characterized by an array of dominant unpalatable perennial plants such as *Asphodelus ramosus*, *Thapsia garganica*, *Ferula communis* and *Cionura erecta* (Figure 6c). Along drystone walls and animal paths occurred plant communities rich in thistles (86) including *Notobasis syriaca*, *Onopordum tauricum*, *Tyrimnus leucographus* and *Cardopatium corymbosum* (Figure 6d). Such vegetation is rich in composite and other flowers which attract and support numerous pollinating and flower-visiting insects. While that kind of vegetation has its phenological optimum in late spring and early summer, the *Dittrichia viscosa*-rich vegetation of disturbed ground (82; Figure 6e) has its optimum in late summer and autumn. Roadsides and field boundaries may be very rich in species and colourful with flowers of *Trifolium purpureum*, *Cichorium intybus*, *Scabiosa atropurpurea*, *Daucus carota*, *Cephalaria transsylvanica* and many others (83; Figure 6f). Similar ecotone habitats were dominated by perennial grasses such as *Hordeum bulbosum* and *Piptatherum miliaceum* (85), on disturbed sandy sites by *Phragmites frutescens* (84).

Nitrophilous annual vegetation was commonly encountered by villages, animal shelters and abandoned sites, with flower aspects of various *Malva* species and *Glebionis coronaria* (81; Figure 6g) or dominated by annual grasses (80) such as *Dasypyrum villosum* and species of *Hordeum*, *Bromus* and *Aegilops*. Subnitrophilous vegetation with its flowering optimum in early spring with, among many others, *Tordylium apulum*, *Urospermum picroides*, *Hedypnois rhagadioloides*, *Vicia hybrida*, *Lotus ornithopodioides* and *Anthriscus caucalis* was found to be differentiated by soil water supply and degree of shade (77, 78, 79).

Constantly trampled ground or wet-dry shallow soil was either well vegetated with spring-ephemeral, often tiny plants such as *Crassula tillaea*, *Polycarpon tetraphyllum*, *Sagina apetala* and *Trifolium suffocatum* (69; Figure 6h), or with permanent swards of *Cynodon dactylon* and sparse summer-annual plants of *Euphorbia* subgen. *Chamaesyce* (68).

An identification key (Table 6) was created to determine vegetation types by their habitat, vegetation traits and floristic properties. While there are almost certainly plant assemblages not covered by the key or that may key out wrongly, identification of most vegetation types should be possible for anybody with some botanical and ecological background.

Species pools of habitats

Ten vegetation class groups were defined corresponding to easily recognized broad-range habitats: 1, Wet wood and scrub; 2, Dry wood and mantle scrub; 3, Phrygana; 4, Dry grassland and rocks; 5, Lagoons and variously dry or seasonally wet coastal hinterland vegetation; 6, Dunes, strandlines and coastal rock; 7, Reeds and non-coastal aquatic and wet-dry sites; 8, Cultivated fields, fallows and gardens; 9, Urban and trampled habitats; 10, Rural pasture and roadside habitats. The species pool found in each of the 10 class groups includes generalists (species not restricted to a particular habitat – the majority in each group) and specialists (indicator species, which are restricted to one or a few classes or species found almost exclusively there) (Table 7). A total of 560 species (64% of all recorded species) were mainly confined to one of the ten vegetation class groups.

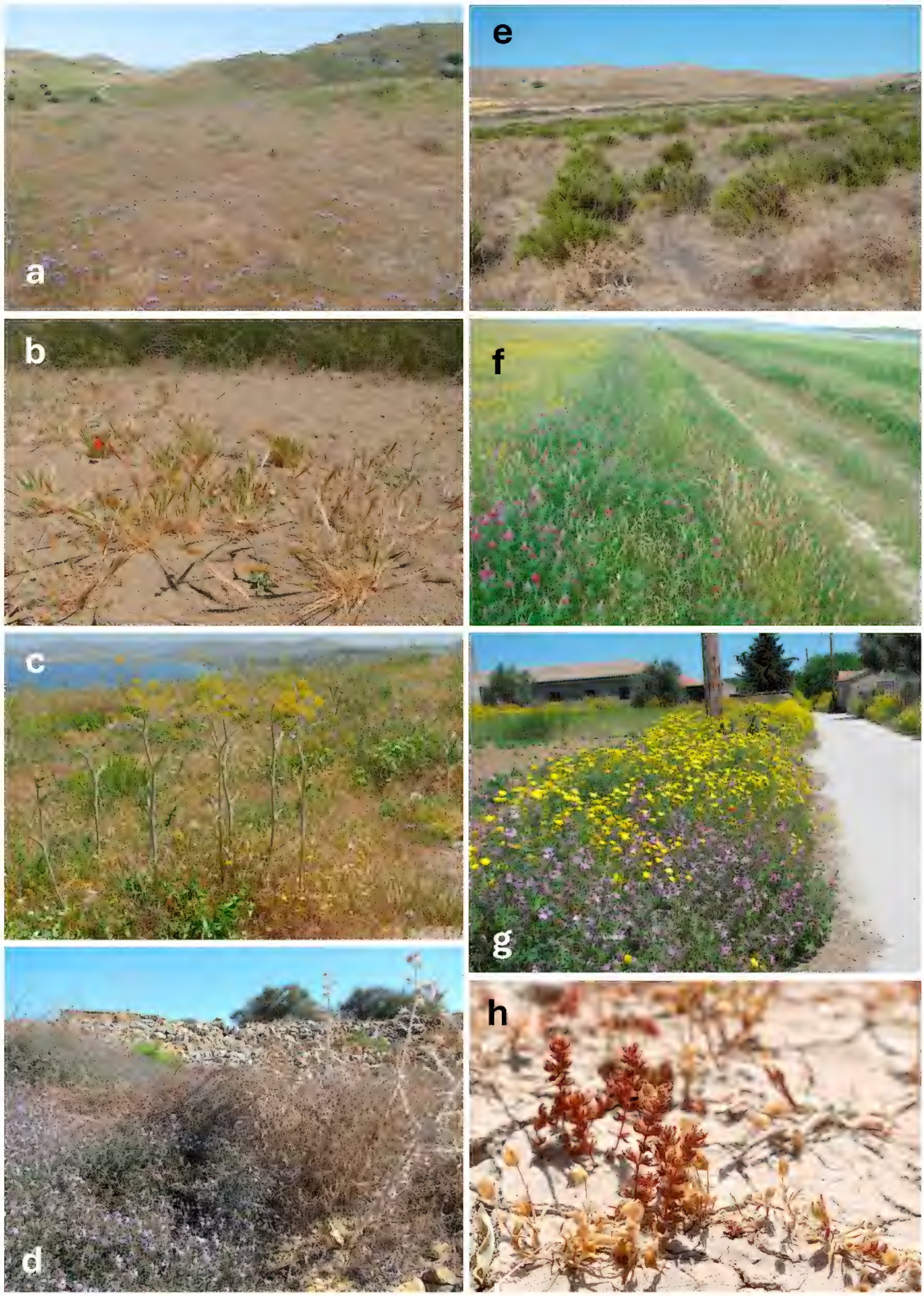

Figure 6. Habitats with rarely photographed dryland and synanthropic vegetation types. (a) Dry pastoral grassland with *Limonium sinuatum*; (b) Sandy grassland with *Vulpia fasciculata* and *Andryala integrifolia* (*Malcolmietalia*); (c) Overgrazed pasture with *Thapsia garganica* and *Cionura erecta* (*Asphodeletalia ramosi*); (d) Late-summer flowering *Plumbago europaea* and withered *Notobasis syriaca* (*Onopordion illyrici*); (e) Abandoned field with *Dittrichia viscosa* (*Inulo viscosae-Agropyrion repentis*); (f) Field boundary with *Trifolium purpureum* (*Bromo-Oryzopsion miliaceae*); (g) Roadside verge rich in flowers of *Glebionis coronaria* and *Malva sylvestris* (*Malvion parviflorae*); (h) Shallow dried-up soil with tiny *Crassula tillaea* and *Sagina apetala* (*Crassulo tillaeae-Saginetum apetalae*). Photos by Ute Bergmeier and Erwin Bergmeier, 2021 and 2025.

Table 4. Plant communities of urban, ruderal and agrestal habitats on the island of Lemnos. 67, Naturalized escapes from amenity planting; 68, *Euphorbion prostratae*; 69, *Polycarpion tetraphylli*; 70, *Galio valantiae-Parietarion judaicae*; 71, 72, 74, *Chenopodion muralis*; 73, *Chenopodion botryos*; 75, 76, *Diplotaxion erucoidis*; 77, *Echio-Galactition tomentosae*; 78, *Euphorbio taurinensis-Geranion lucidi*; 79, *Geranio pusilli-Anthriscion caucalidis*; 80, *Hordeion murini*; 81, *Malvion parviflorae*; 82, *Inulo viscosae-Agropyrion repentis*; 83, 84, 85, *Bromo-Oryzopsion miliaceae*; 86, *Onopordion illyrici*; 87, 88, *Asphodeletalia ramosi*; 89, *Pteridium aqulilinum* stands; 90, *Silybo mariani-Urticion pilulifer-ae*; 91, *Balloto-Conion maculati*; 92, *Roemerion hybridae*; 93, *Ridolfion segeti*; 94, *Rumicion bucephalophori*. C/D, characteristic or differential species. The C/D species are indicative for the given syntaxon or its subordinate syntaxa. The frequency (constancy) figures for vegetation types are percentages, those with <5 relevés in italics to indicate potentially lesser diagnostic reliability. Species with <30% constancy in any column (vegetion type) are omitted (except for few species considered diagnostic). An unabridged synoptic table and a full table with all relevés can be found in Suppl. material 4 and Suppl. material 8, respectively.

Vegetation type number	**67**	**68**	**69**	**70**	**71**	**72**	**73**	**74**	**75**	**76**	**77**	**78**	**79**	**80**	**81**	**82**	**83**	**84**	**85**	**86**	**87**	**88**	**89**	**90**	**91**	**92**	**93**	**94**
Number of relevés	**2**	**7**	**10**	**6**	**2**	**2**	**2**	**1**	**41**	**24**	**17**	**2**	**2**	**17**	**11**	**12**	**19**	**6**	**9**	**20**	**10**	**10**	**4**	**20**	**7**	**23**	**75**	**81**
Amenity planting escapes																												
Phyla canescens	*100*	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cenchrus clandestinus	*50*	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Carpobrotus edulis	*50*	.	.	17	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
C/D Euphorbion prostratae																												
Cynodon dactylon	*50*	86	.	.	.	.	.	.	22	42	.	.	.	6	.	8	21	17	.	.	.	.	.	5	.	.	.	5
Tribulus terrestris	.	29	.	.	.	.	.	.	5	17	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Euphorbia maculata	.	29	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
C/D Polycarpion tetraphylli																												
Plantago coronopus + weldenii	*50*	14	90	.	.	.	.	.	.	.	24	.	.	29	.	.	.	.	.	5	.	20	.	.	.	4	1	4
Sagina apetala	.	.	80	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	10	.	.	.	.	3	9
Polycarpon tetraphyllum	.	.	60	.	.	.	*50*	.	.	.	18	.	.	6	.	.	.	.	.	5	10	40	.	5	.	.	1	1
Spergularia bocconei	.	.	60	.	.	.	.	.	2	.	.	.	.	12	.	.	.	.	.	5	.	.	.	5	.	.	.	.
Trifolium suffocatum	.	.	60	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Crassula tillaea	.	.	30	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
C/D Cymbalario-Parietarietea diffusae																												
Parietaria judaica	.	.	.	67	*50*	*50*	.	.	.	.	.	.	.	6	.	.	.	.	.	.	.	.	.	5	14	.	.	.
Erigeron sumatrensis	.	.	.	33	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Lactuca saligna	.	.	.	33	.	.	.	.	7	.	.	.	.	.	.	8	26	.	.	.	.	.	.	.	.	.	.	1
C/D Chenopodietalia + Eragrostietalia																												
Dysphania ambrosioides	.	.	10	.	*100*	*50*	.	.	.	8	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Setaria adhaerens	.	.	.	.	*50*	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Hyoscyamus albus	.	.	.	.	*50*	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	14	.	.	.
Datura wrightii	.	.	.	.	.	*100*	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Ecballium elaterium	.	.	.	.	.	*100*	.	.	5	13	.	.	.	6	9	17	5	.	.	.	.	.	.	.	29	4	.	1
Phytolacca americana	.	.	.	.	.	*100*	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Plantago arenaria	.	.	.	.	.	.	*100*	.	5	4	.	.	.	.	.	.	.	17	.	.	.	.	.	.	.	.	.	9
Echium angustifolium	.	.	.	.	.	.	*50*	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Brassica tournefortii	.	.	.	.	.	.	*50*	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Alkanna tinctoria	.	.	.	.	.	.	*50*	.	5	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1
Atriplex tatarica	.	.	.	.	.	.	.	*100*	7	4	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	2
Salsola squarrosa	.	.	.	.	.	.	.	*100*	27	33	.	.	.	.	.	.	5	.	.	.	.	.	.	5	.	.	.	2
Dittrichia graveolens	.	.	.	.	.	.	*50*	.	95	25	.	.	.	.	.	42	16	.	.	10	10	.	*25*	.	.	.	.	2
Kickxia elatine subsp. *crinita*	.	.	.	.	.	.	.	.	29	8	.	.	.	.	.	8	5	.	.	.	.	.	.	.	.	.	.	.
Heliotropium europaeum	.	.	.	.	.	.	.	.	71	79	.	.	.	.	.	.	11	.	.	.	.	.	.	.	.	.	.	.

Vegetation type number	**67**	**68**	**69**	**70**	**71**	**72**	**73**	**74**	**75**	**76**	**77**	**78**	**79**	**80**	**81**	**82**	**83**	**84**	**85**	**86**	**87**	**88**	**89**	**90**	**91**	**92**	**93**	**94**
Number of relevés	**2**	**7**	**10**	**6**	**2**	**2**	**2**	**1**	**41**	**24**	**17**	**2**	**2**	**17**	**11**	**12**	**19**	**6**	**9**	**20**	**10**	**10**	**4**	**20**	**7**	**23**	**75**	**81**
Chrozophora tinctoria	.	.	.	.	.	.	.	.	22	33	.	.	.	.	.	8	.	.	.	.	.	.	.	.	.	.	.	.
Amaranthus blitoides	.	.	.	.	.	.	.	.	7	88	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Chenopodium betaceum	.	.	.	.	*50*	*50*	.	.	7	83	.	.	.	.	.	.	11	.	.	.	.	.	.	5	.	.	.	1
Amaranthus albus	.	14	.	.	*50*	.	.	.	10	83	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Amaranthus retroflexus	.	14	.	.	.	.	.	.	.	71	.	.	.	.	.	.	5	.	.	.	.	.	.	.	.	.	.	.
Solanum nigrum	.	.	.	.	.	.	.	.	.	63	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1
Portulaca oleracea agg.	.	14	.	.	.	.	.	.	.	58	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Solanum alatum + villosum	.	.	.	.	.	.	.	.	2	54	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Datura stramonium	.	.	.	.	.	.	.	.	5	50	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Sorghum halepense	.	.	.	.	.	.	.	.	10	46	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Xanthium spinosum	.	.	.	.	.	.	.	.	2	46	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Xanthium orientale subsp. *italicum*	.	.	.	.	.	.	.	*100*	7	38	.	.	.	6	.	.	.	.	.	.	.	.	.	.	.	.	.	2
D/C Brometalia rubenti-tectorum + Geranio purpureae-Cardaminetalia hirsutae																												
Hedypnois rhagadioloides subsp. *rhagadioloides*	.	.	.	.	.	.	.	.	.	.	82	*50*	.	6	.	8	16	.	11	25	10	40	.	5	.	13	7	2
Tordylium apulum	.	.	.	.	.	.	.	.	.	.	71	.	*50*	12	9	.	.	.	33	40	10	60	.	25	.	4	13	1
Urospermum picroides	.	.	.	.	.	.	*50*	.	.	.	53	*50*	*50*	29	18	25	5	.	33	30	40	60	*25*	15	14	17	4	11
Bromus madritensis	.	.	.	17	.	.	.	.	.	.	53	.	*50*	29	18	8	16	.	33	30	30	30	.	15	.	22	11	10
Papaver dubium agg.	.	.	.	17	.	.	.	.	.	.	41	.	.	6	.	.	.	.	.	5	20	10	.	.	.	.	.	1
Mercurialis annua	.	.	.	33	.	.	.	.	.	.	35	.	.	6	9	.	.	.	.	5	10	10	.	10	.	.	.	.
Aegilops biuncialis	.	.	.	.	.	.	.	.	.	.	29	.	.	12	.	.	.	.	.	5	10	10	.	.	.	.	.	.
Trifolium globosum	.	.	10	.	.	.	.	.	.	.	29	.	.	6	.	.	5	.	11	5	.	10	.	.	.	.	.	.
Trifolium subterraneum	.	.	.	.	.	.	.	.	.	.	24	.	.	.	.	.	.	.	22	.	.	30	.	.	.	.	3	4
Salvia verbenaca	.	.	10	.	.	.	.	.	.	.	24	.	.	.	.	.	.	.	.	5	10	30	.	.	.	.	1	.
Knautia integrifolia	.	.	.	.	.	.	.	.	.	.	35	.	.	24	.	8	5	.	.	10	30	10	.	.	.	.	3	.
Euphorbia peplus	.	.	.	.	.	.	.	.	.	.	29	.	.	.	.	.	.	.	.	.	.	20	*25*	.	.	.	.	1
Medicago polymorpha	.	.	.	.	.	.	.	.	.	.	35	*50*	.	12	9	.	5	.	44	15	.	40	.	.	.	22	21	2
Crepis commutata	.	.	.	.	.	.	*50*	.	.	.	29	*50*	.	12	.	.	.	17	.	5	20	30	.	5	.	.	1	1
Hymenocarpos circinnatus	.	.	10	.	.	.	.	.	.	.	18	*50*	.	.	.	.	.	.	.	.	.	30	.	.	.	9	1	1
Hypochaeris achyrophorus	.	.	.	.	.	.	.	.	.	.	24	*50*	.	.	.	.	.	.	11	5	.	30	.	.	.	.	.	.
Trifolium petrisavii	.	.	10	.	.	.	.	.	.	.	12	*100*	.	.	.	8	5	.	.	.	.	30	.	.	.	.	20	5
Vicia hybrida	.	.	.	.	.	.	.	.	.	.	6	*100*	.	6	.	.	.	.	11	.	.	.	.	.	.	.	.	.
Astragalus hamosus	.	.	.	.	.	.	.	.	.	.	6	*100*	.	.	.	.	.	.	.	10	.	.	.	.	.	9	1	.
Geranium purpureum	.	.	.	.	.	.	.	.	.	.	6	*100*	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Crepis vesicaria	.	.	.	.	.	.	.	.	.	.	.	*100*	.	.	.	.	.	.	.	.	.	.	.	.	.	9	1	.
Medicago orbicularis	.	.	.	.	.	.	.	.	.	.	.	*100*	.	.	.	.	.	.	11	5	.	.	.	.	.	4	1	.
Hypericum perfoliatum	.	.	.	.	.	.	.	.	.	.	.	*100*	.	.	.	8	.	.	.	15	.	10	.	5	.	.	.	.
Vicia parviflora	.	.	.	.	.	.	.	.	.	.	.	*50*	*50*	.	.	.	.	.	.	.	.	.	.	.	.	4	.	.
Geranium dissectum	.	.	.	.	.	.	.	.	.	4	.	*50*	*50*	29	.	8	5	.	33	5	.	.	.	.	.	.	11	2
Anthriscus caucalis	.	.	.	17	.	.	.	.	.	.	.	.	*100*	.	.	.	.	.	.	.	.	.	.	5	.	.	.	1
Hordeum vulgare subsp. *spontaneum*	.	.	.	.	.	.	.	.	.	.	.	.	.	29	18	.	.	.	.	10	.	.	.	.	.	.	.	1
Hordeum murinum subsp. *leporinum*	.	.	20	17	.	.	.	.	.	.	29	.	.	76	45	.	5	.	44	50	.	20	.	55	29	.	12	21
Bromus diandrus	.	.	.	17	.	.	.	2	.	.	.	.	.	71	64	.	11	17	.	10	.	.	.	15	43	4	7	15
Avena barbata	.	.	.	33	.	.	*50*	.	.	.	59	.	.	59	64	.	5	.	22	30	10	70	*25*	5	43	4	7	4
Malva sylvestris	.	.	.	17	.	.	.	.	.	.	29	.	.	41	91	.	.	.	11	30	10	10	.	30	43	13	7	14
Glebionis coronaria	.	.	.	17	.	.	.	.	.	.	.	.	.	.	82	.	.	.	.	5	.	.	.	5	.	.	.	1
Malva multiflora	.	.	.	.	.	.	.	.	.	.	.	.	.	.	55	.	.	.	.	.	.	.	.	.	.	.	.	.

Vegetation type number	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94
Number of relevés	**2**	**7**	**10**	**6**	**2**	**2**	**2**	**1**	**41**	**24**	**17**	**2**	**2**	**17**	**11**	**12**	**19**	**6**	**9**	**20**	**10**	**10**	**4**	**20**	**7**	**23**	**75**	**81**
D/C Elytrigio repentis-Dittrichietalia viscosae + Carthametalia lanati																												
Dittrichia viscosa	.	.	.	.	*50*	.	.	.	66	4	12	*50*	.	.	.	100	63	17	.	5	30	30	*25*	.	.	.	3	2
Scolymus hispanicus	.	.	.	.	.	.	*50*	.	10	.	6	.	.	.	.	58	16	.	.	55	.	.	.	.	.	.	.	.
Bromus hordeaceus	.	.	.	.	.	.	.	.	7	.	12	.	.	12	.	58	21	.	22	20	10	10	.	10	.	.	12	9
Tragopogon dubius	.	.	.	.	.	.	.	.	.	.	18	.	.	12	.	42	16	.	.	10	.	.	.	.	.	.	.	1
Verbascum lasianthum	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	33	.	.	11	.	.	.	.	.	.	.	.	.
Scolymus maculatus	.	.	.	.	.	.	.	.	2	.	.	.	.	.	.	33	.	.	.	.	.	.	.	.	.	.	.	.
Daucus carota	.	.	.	.	.	.	.	.	20	13	6	.	.	6	.	25	95	17	.	10	10	.	.	.	14	.	8	6
Cichorium intybus	.	.	.	.	.	.	.	.	37	8	18	.	.	24	18	58	79	.	44	30	10	20	.	5	.	35	15	12
Trifolium purpureum	.	.	.	.	.	.	.	.	2	.	18	.	.	18	9	17	63	33	33	10	.	.	.	.	.	13	4	10
Scabiosa atropurpurea	.	.	.	.	.	.	.	.	2	.	.	.	.	.	.	25	58	.	.	5	.	10	.	.	.	4	.	.
Cephalaria transsylvanica	.	.	.	.	.	.	.	.	2	.	.	.	.	.	.	.	37	.	.	.	.	.	.	.	.	.	3	.
Verbascum sinuatum	.	.	.	.	.	.	.	.	5	8	.	.	.	6	.	17	32	17	.	20	.	10	.	.	.	4	1	1
Phragmites frutescens	.	.	.	.	.	.	.	.	.	.	.	.	.	6	.	.	.	100	.	.	.	.	.	.	.	.	.	.
Cladanthus mixtus	.	.	.	.	.	.	.	.	7	8	.	.	.	24	.	.	5	50	.	.	.	.	.	.	.	4	8	28
Hordeum bulbosum	.	.	.	.	.	.	.	.	.	.	41	.	.	35	.	25	5	.	100	35	50	70	.	.	.	4	1	1
Notobasis syriaca	.	.	.	.	.	.	.	.	.	.	6	.	.	12	.	17	.	.	33	80	10	20	.	20	.	35	7	4
Onopordum tauricum	.	.	.	.	.	.	.	.	.	.	.	.	.	.	9	.	.	.	.	80	30	20	.	15	.	.	1	.
Tyrimnus leucographus	.	.	.	.	.	.	*50*	.	.	.	29	.	*50*	18	.	.	5	.	11	45	10	40	.	.	.	4	3	10
Carthamus lanatus	.	.	.	.	.	.	*50*	.	.	.	12	.	.	.	.	.	5	.	11	35	.	10	.	.	.	13	4	2
Cardopatium corymbosum	.	.	.	.	.	.	.	.	2	.	6	.	.	.	.	.	5	.	33	30	.	.	.	.	.	.	.	.
Picnomon acarna	.	.	.	.	.	.	.	.	2	.	24	.	.	12	.	.	.	17	11	25	30	.	.	.	.	.	3	.
D/C Asphodeletalia ramosi																												
Ballota acetabulosa	.	.	.	.	.	.	.	.	.	.	29	.	.	.	9	.	.	.	.	20	80	40	.	10	.	.	.	.
Euphorbia characias	.	.	.	.	.	.	.	.	.	.	6	.	.	.	.	8	.	.	.	.	70	50	.	5	.	.	.	.
Asphodelus ramosus	.	.	.	.	.	.	.	.	.	.	6	*50*	.	.	.	.	.	.	.	10	30	100	*25*	.	.	.	.	.
Cionura erecta	.	.	.	.	.	.	.	.	.	.	.	.	*50*	6	.	.	.	.	.	.	20	.	.	.	.	.	.	.
Eryngium campestre	.	.	.	.	.	.	.	.	.	.	18	.	.	.	.	.	16	.	11	25	10	90	.	.	.	17	4	2
Dactylis glomerata subsp. *hispanica*	.	.	.	.	.	.	.	.	.	.	24	*50*	.	6	.	8	16	.	22	5	20	70	*25*	.	.	.	.	.
Myosotis ramosissima	.	.	.	.	.	.	.	.	.	.	6	.	.	.	.	.	.	.	.	.	.	50	*25*	.	.	.	1	2
Ferula communis	.	.	.	.	.	.	.	.	.	.	.	*50*	.	6	9	.	5	.	.	10	10	40	.	.	14	.	1	.
Linaria pelisseriana	.	.	10	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	40	.	.	.	.	7	6
Aira elegantissima	.	.	20	.	.	.	.	.	.	.	6	.	.	.	.	.	.	.	.	.	.	40	.	.	.	.	.	1
Origanum vulgare	.	.	.	.	.	.	.	.	.	.	.	*50*	.	.	.	.	.	.	.	5	.	40	.	.	.	.	.	.
Limonium sinuatum	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	5	.	30	.	.	.	.	.	.
Pteridium aquilinum	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	*100*	.	.	.	.	.
C Silybo mariani-Urticion piluliferae																												
Urtica pilulifera	.	.	.	.	.	.	.	.	.	.	.	.	*50*	.	27	.	.	.	.	10	10	10	.	70	.	.	3	.
Silybum marianum	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	40	14	.	1	1
C Balloto-Conion maculati																												
Conium maculatum	.	.	.	.	.	.	.	.	.	.	.	.	.	.	9	.	.	.	.	.	.	.	.	5	57	.	.	.
Rumex cristatus	.	.	.	.	*50*	.	.	.	.	.	.	.	*50*	6	9	.	.	17	.	.	.	.	.	5	43	.	3	2
Rubia tinctorum	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	29	.	.	.
C/D Papaveretea rhoeadis																												
Galium tricornutum	.	.	.	.	.	.	.	.	.	.	12	.	.	.	.	.	.	.	11	.	.	.	.	.	.	87	37	5
Leontice leontopetalum	.	.	.	.	.	.	.	.	.	.	6	.	.	.	.	.	.	.	.	.	.	.	.	.	.	83	4	5

Vegetation type number	**67**	**68**	**69**	**70**	**71**	**72**	**73**	**74**	**75**	**76**	**77**	**78**	**79**	**80**	**81**	**82**	**83**	**84**	**85**	**86**	**87**	**88**	**89**	**90**	**91**	**92**	**93**	**94**
Number of relevés	**2**	**7**	**10**	**6**	**2**	**2**	**2**	**1**	**41**	**24**	**17**	**2**	**2**	**17**	**11**	**12**	**19**	**6**	**9**	**20**	**10**	**10**	**4**	**20**	**7**	**23**	**75**	**81**
Bifora testiculata	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	11	.	.	.	.	.	.	61	15	.
Anagallis foemina	.	.	.	.	.	.	.	.	12	.	.	.	.	.	.	.	.	.	11	.	.	.	.	.	.	52	4	7
Buglossoides arvensis	.	.	.	.	.	.	.	.	.	.	6	.	.	.	.	.	.	.	.	.	.	.	.	.	.	52	3	6
Silene vulgaris subsp. *macrocarpa*	.	.	.	.	.	.	.	.	5	.	.	.	.	.	.	17	.	.	.	5	.	.	.	.	.	52	9	14
Rhagadiolus stellatus	.	.	.	.	.	.	.	.	.	.	6	.	.	.	.	.	5	.	11	5	.	.	.	.	.	43	5	.
Echinophora tenuifolia subsp. *sibthorpiana*	.	.	.	.	.	.	.	.	12	.	6	.	.	.	.	.	5	.	.	.	.	.	.	.	.	35	.	7
Medicago scutellata	.	.	.	.	.	.	.	.	.	.	6	.	.	.	.	.	5	.	11	.	.	.	.	.	.	30	7	4
Rapistrum rugosum	.	.	.	.	.	.	.	.	20	25	12	.	.	6	18	.	21	.	33	.	10	.	.	5	29	78	73	16
Scandix pecten-veneris	.	.	.	.	.	.	.	.	.	.	18	.	.	12	18	.	.	.	44	.	.	20	.	.	14	78	63	9
Anthemis cotula	.	.	.	17	.	.	.	.	2	8	6	.	.	6	.	.	.	17	.	.	.	.	.	.	14	70	77	38
Sinapis arvensis	.	.	.	.	.	.	.	.	.	.	12	.	.	.	.	.	5	.	11	5	.	.	.	.	.	74	44	27
Lathyrus aphaca	.	.	.	.	.	.	.	.	.	.	6	.	.	.	.	.	.	.	33	.	.	.	.	.	.	65	44	12
Vicia lutea	.	.	.	.	.	.	.	.	.	.	18	.	.	18	.	.	5	.	33	.	.	.	.	.	.	57	49	10
Glebionis segetum	.	.	.	.	.	.	.	.	.	.	18	.	.	6	.	.	5	.	22	5	.	10	.	.	.	39	56	12
Papaver rhoeas	.	.	.	.	.	.	.	.	.	.	18	.	*50*	35	36	.	11	.	.	20	20	20	.	15	29	74	65	75
Melilotus indicus	.	.	10	.	.	.	.	.	5	.	6	.	.	12	36	.	11	.	22	.	10	.	.	.	.	61	53	43
Raphanus raphanistrum	.	.	.	.	.	.	.	.	5	25	18	.	.	24	27	.	5	.	.	5	.	.	.	.	.	35	69	75
Lolium temulentum	.	.	.	.	.	.	.	.	5	.	.	.	.	.	.	.	.	.	11	.	.	.	.	5	.	30	59	20
Agrostemma githago	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	8	.	.	.	.	.	.	.	.	.	26	52	20
Silene gallica	.	.	.	.	.	.	.	.	.	.	12	.	.	6	.	.	5	.	11	5	.	30	.	.	.	4	48	19
Ranunculus sardous agg.	.	.	.	.	.	.	.	.	.	.	.	.	.	6	.	.	.	.	.	5	.	10	.	.	.	13	40	4
Phalaris paradoxa	.	.	.	.	.	.	.	.	5	.	.	.	.	6	.	.	.	.	11	.	.	.	.	.	.	17	31	21
Herniaria hirsuta	.	.	10	.	.	.	.	.	.	.	.	.	.	6	.	.	.	.	.	5	.	10	.	.	.	9	16	67
Anchusa undulata subsp. *hybrida*	.	.	.	.	.	.	*50*	.	7	.	.	.	*50*	6	.	.	11	17	.	20	10	10	.	.	14	9	9	58
Polygonum arenarium	.	.	.	.	.	.	.	.	66	17	.	.	.	.	.	.	5	.	.	.	.	.	.	.	.	9	27	49
Papaver hybridum	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	5	.	.	.	5	.	26	7	43
Hypecoum imberbe	.	.	.	.	.	.	.	.	.	.	.	.	.	6	.	.	.	.	.	.	.	.	.	.	.	.	4	33
Juncus bufonius	.	.	.	.	.	.	.	.	.	.	.	.	.	6	.	.	.	.	.	.	.	.	.	.	.	.	13	28
Others (non-differential species)																												
Ammi majus	.	.	.	17	.	.	.	.	10	.	29	.	.	6	18	33	32	17	22	.	10	.	.	.	14	39	35	11
Anagallis arvensis	.	.	10	.	.	.	*50*	.	29	21	29	*100*	.	12	.	8	5	.	22	25	10	60	.	15	.	83	85	81
Anthemis auriculata	.	.	.	.	.	.	.	.	2	.	29	.	.	12	.	.	.	.	.	10	.	30	.	.	.	.	3	28
Asparagus acutifolius	.	.	.	.	.	.	.	.	.	.	12	*50*	.	.	.	.	5	.	.	.	.	20	*25*	.	.	.	.	.
Avena sterilis	.	.	.	.	.	.	.	.	7	8	29	.	.	47	36	42	47	17	44	25	10	20	.	20	29	17	13	15
Beta vulgaris subsp. *maritima*	.	.	.	.	.	.	.	.	.	.	24	.	.	6	9	.	11	.	44	10	10	.	.	5	14	.	.	4
Bromus scoparius	.	.	.	.	.	.	.	.	5	.	24	.	.	6	.	8	.	.	.	.	.	40	.	5	.	.	4	4
Bromus sterilis	.	.	.	.	.	.	.	.	.	.	12	.	.	29	.	8	11	.	.	.	.	10	*25*	25	29	.	1	9
Bromus tectorum	.	.	.	.	.	.	*50*	.	.	.	29	.	.	12	.	.	.	.	.	15	10	50	.	.	.	.	4	12
Bunias erucago	.	.	.	.	.	.	.	.	.	.	24	.	.	6	.	.	.	.	.	5	10	40	.	.	.	4	3	6
Calendula arvensis	.	.	.	.	.	.	.	.	.	.	35	*50*	.	6	.	.	5	.	22	40	10	50	.	15	.	35	20	1
Capsella bursa-pastoris	.	.	20	.	.	.	.	.	.	.	6	.	.	.	9	.	.	.	.	10	.	30	.	25	.	.	15	9
Carduus pycnocephalus	.	.	10	.	.	.	.	.	2	.	65	.	.	35	36	.	.	.	33	45	20	40	.	35	71	13	11	15
Carlina corymbosa subsp. *graeca*	.	.	10	.	.	.	.	.	5	.	24	.	.	.	.	50	11	.	.	30	40	90	.	5	.	4	4	1
Catapodium rigidum	*50*	.	20	.	.	.	.	.	.	.	29	*50*	.	.	.	.	.	.	.	5	.	10	.	5	.	4	4	1
Centaurea solstitialis	.	.	.	.	.	.	.	.	73	21	29	.	.	12	.	42	68	.	22	25	.	.	.	.	.	43	15	11
Cerastium glomeratum	.	.	10	.	.	.	.	.	.	.	35	.	.	.	.	.	.	.	.	10	.	30	.	.	.	.	19	15

Vegetation type number	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94
Number of relevés	**2**	**7**	**10**	**6**	**2**	**2**	**2**	**1**	**41**	**24**	**17**	**2**	**2**	**17**	**11**	**12**	**19**	**6**	**9**	**20**	**10**	**10**	**4**	**20**	**7**	**23**	**75**	**81**
Chondrilla juncea	.	.	.	17	.	.	*50*	.	24	29	.	.	.	.	9	8	37	17	.	15	.	.	.	.	.	9	.	9
Convolvulus arvensis	.	14	20	.	.	.	.	.	20	54	18	.	.	35	9	.	5	.	44	20	10	.	.	.	14	57	33	17
Crepis commutata	.	.	.	.	.	.	*50*	.	.	.	29	*50*	.	12	.	.	.	17	.	5	20	30	.	5	.	.	1	1
Echium plantagineum	.	.	.	.	.	.	.	.	.	4	24	.	.	6	9	.	.	.	11	10	.	30	.	.	.	.	9	4
Erodium cicutarium	.	.	30	.	.	.	.	.	.	.	.	.	.	6	.	.	.	.	.	.	.	20	.	5	14	4	3	5
Euphorbia helioscopia	.	.	.	.	.	.	.	.	.	.	18	.	.	18	9	.	.	.	.	15	10	10	.	.	.	.	12	7
Filago pyramidata	.	.	40	.	.	.	*50*	.	5	.	35	.	.	12	.	17	5	.	.	15	.	60	.	.	.	39	17	28
Galium aparine	.	.	.	17	.	.	.	.	.	.	24	.	*50*	29	27	.	.	.	56	10	30	30	*25*	30	43	.	1	1
Galium murale	.	.	30	.	.	.	.	.	.	.	12	.	.	.	.	.	.	.	.	.	10	20	.	15	.	4	1	.
Geranium molle	.	.	.	50	.	.	.	.	.	.	24	.	.	6	9	.	.	.	11	5	10	50	.	25	.	.	1	6
Hirschfeldia incana	.	.	.	.	.	.	*100*	.	20	4	41	*50*	.	35	36	42	11	.	11	85	10	60	.	5	.	39	20	30
Hymenocarpos circinnatus	.	.	10	.	.	.	.	.	.	.	18	*50*	.	.	.	.	.	.	.	.	.	30	.	.	.	9	1	1
Hypericum triquetrifolium	.	.	.	.	.	.	*100*	.	39	13	18	.	.	12	.	58	58	.	11	10	20	70	.	.	.	83	9	12
Hypochaeris achyrophorus	.	.	.	.	.	.	.	.	.	.	24	*50*	.	.	.	.	.	.	11	5	.	30	.	.	.	.	.	.
Lactuca serriola	.	.	.	17	.	.	.	.	10	4	12	.	.	18	27	8	.	.	11	.	.	.	.	.	29	.	5	5
Lagoecia cuminoides	.	.	.	.	.	.	.	.	.	.	18	.	.	.	.	17	5	.	44	10	20	70	*25*	.	.	4	1	.
Lagurus ovatus	.	.	.	17	.	.	*50*	.	.	.	59	.	.	29	.	8	21	17	.	35	10	60	.	10	.	.	3	5
Lamium amplexicaule	.	.	.	.	.	.	.	.	.	.	6	.	.	6	.	.	.	.	.	.	.	20	*25*	5	14	17	15	11
Lolium rigidum	*50*	.	10	.	.	.	.	.	12	.	65	.	.	47	36	.	16	.	56	30	10	40	.	15	.	96	88	86
Matricaria chamomilla	.	.	60	.	.	.	.	.	7	4	6	.	.	18	.	8	.	.	.	10	10	20	.	35	14	.	56	46
Medicago polymorpha	.	.	.	.	.	.	.	.	.	.	35	*50*	.	12	9	.	5	.	44	15	.	40	.	.	.	22	21	2
Petrorhagia dubia	.	.	.	.	.	.	.	.	.	.	24	*50*	.	.	.	.	.	.	.	5	.	50	.	.	.	.	1	.
Plantago lagopus	.	.	30	.	.	.	.	.	10	4	47	*50*	.	24	9	.	11	.	.	35	30	70	.	10	14	39	12	11
Plumbago europaea	.	.	.	.	.	.	.	.	.	.	6	.	.	.	18	8	5	17	.	5	30	.	.	5	14	.	.	.
Poa trivialis subsp. *sylvicola*	.	.	.	.	.	.	.	.	.	.	.	.	*50*	29	.	8	11	.	22	.	10	.	.	.	.	.	11	4
Rostraria cristata	.	.	60	.	.	.	*50*	.	.	.	47	*50*	.	6	.	.	.	.	.	10	20	40	.	15	.	.	5	4
Rumex pulcher	.	.	20	.	.	.	.	.	22	4	29	.	.	12	18	50	21	.	78	25	30	30	.	20	14	43	44	12
Rumex tuberosus subsp. *creticus*	.	.	.	.	.	.	.	.	.	.	24	.	.	.	.	.	.	.	11	.	10	20	*50*	.	.	.	.	.
Sarcopoterium spinosum	.	.	.	.	.	.	.	.	2	.	24	.	.	12	.	25	5	.	.	10	40	50	.	.	.	.	1	.
Senecio vernalis	.	.	.	.	.	.	.	.	.	.	24	.	.	6	.	.	.	.	11	20	30	10	.	5	.	.	13	10
Sherardia arvensis	.	.	.	.	.	.	.	.	.	.	35	*50*	.	6	.	.	11	.	44	10	.	70	*25*	.	.	30	21	6
Silene dichotoma	.	.	.	.	.	.	.	.	.	.	6	.	.	.	.	.	.	.	22	10	.	40	.	.	.	.	.	2
Sonchus asper subsp. *glaucescens*	.	.	.	.	.	.	.	.	34	42	47	.	*50*	18	.	25	21	.	33	25	20	20	.	5	.	100	63	52
Sonchus oleraceus	.	.	10	67	.	.	*50*	.	.	29	24	.	.	18	55	.	5	.	.	25	.	20	.	35	43	13	28	14
Symphyotrichum squamatum	.	14	.	17	*50*	*50*	.	*100*	24	13	.	.	.	.	.	17	37	.	.	.	.	.	.	.	.	.	.	.
Taraxacum spp.	.	.	10	33	.	.	.	.	2	.	6	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Torilis nodosa	*50*	.	.	17	.	.	.	.	2	.	53	*50*	*50*	41	18	8	26	17	67	25	20	30	.	30	14	57	33	4
Trifolium campestre	.	.	10	.	.	.	.	.	.	.	53	*100*	.	29	.	8	5	.	44	5	10	50	.	.	.	4	20	11
Trifolium stellatum	.	.	.	.	.	.	.	.	.	.	47	.	.	.	.	.	.	.	33	.	10	40	.	.	.	9	3	.
Vicia sativa	.	.	.	.	.	.	.	.	.	.	12	.	.	18	.	.	.	.	33	.	.	.	.	.	.	17	35	12
Vulpia ciliata	*50*	.	10	.	.	.	.	.	.	.	12	.	.	6	.	.	.	.	.	5	10	40	.	5	.	.	.	2

Table 5. Conspectus of vegetation classes, alliances (or order) and associations (or equivalent informal communities) of the classified vegetation types on the island of Lemnos. The syntaxonomy follows EuroVegChecklist (Mucina et al. 2016) unless otherwise stated in the Supplementary material (the square-bracketed figure after the name of the syntaxon indicates the paragraph in Suppl. material 9). Author citations of the associations and syntaxonomic considerations can be found in the Supplementary material (the bracketed figure in superscript after the name of the association or community indicates the paragraph in Suppl. material 10). Numbers of the vegetation types as in Tables 1–4. Corresponding habitat codes are according to FloraVeg.EU (Chytrý et al. 2024) and Habitats Directive Annex I (European Commission 2013).

Class	Alliance (Order)	Associations and comm. equivalents	Veg.type number	Number of Relevés	FloraVeg. EU	Annex I Habitat
Adiantetea	*Adiantion*	*Eucladio-Adiantetum*[(1)]	20	1	U3D	
Alno glutinosae-Populetea albae	*Platanion orientalis*	*Platanus orientalis* comm.[(2)]	2	1	T14	92C0
	Lauro nobilis-Fraxinion angustifoliae	*Dioscorea communis-Ulmus minor* comm.[(3)]	1	4	T14	92A0
Ammophiletea arundinaceae [1]	*Ammophilion arundinaceae* [1]	*Medicagini marinae-Ammophiletum arundinaceae*[(4)]	64	22	N14	2110, 2120
	Centaureo cuneifoliae-Verbascion pinnatifidi [2]	*Verbascum pinnatifidum* comm.[(5)]	63	1	-	2220
	Helichryso barrelieri-Centaureion spinosae [3]	*Medicagini marinae-Centaureetum spinosae*[(6)]	8	9	N16, N35	2260
Artemisietea vulgaris	*Balloto-Conion maculati*	*Galio aparines-Conietum maculati*; aff. *Rubio tinctorum-Sambucetum ebuli*[(7)]	91	7	V39	
	Bromo-Oryzopsion miliaceae	*Centaurea solstitalis-Trifolium purpureum* comm.; *Phragmites frutescens* comm.; *Hordeum bulbosum* comm.[(8)]	83,84,85	34	V38	
	(*Asphodeletalia ramosi*) [4]	*Asphodelo ramosi-Feruletum communis*; *Euphorbia characias-Ballota acetabulosa* comm., *Cionura erecta* comm.[(9)]	87,88	20	V33	
	Inulo viscosae-Agropyrion repentis	*Scolymus hispanicus-Dittrichia viscosa* comm.[(10)]	82	12	V15, V33	
	Onopordion illyrici	*Notobasis syriaca-Onopordum tauricum* comm.[(11)]	86	20	V33	
	Silybo mariani-Urticion piluliferae	*Geranio pusilli-Silybetum mariani*[(12)]	90	20	V39	
Asplenietea trichomanis	*Polygonion icarici*	*Polygonetum icarici*[(13)]	21	7	U34	8220
Cakiletea maritimae	*Euphorbion peplidis*	*Salsolo squarrosae-Cakiletum maritimae*; *Glaucio flavi-Matthioletum tricuspidatae*[(14)]	62	15	N12	1210
Charetea intermediae	*Charion canescentis*	*Charetum galioidis*[(15)]	57	1	P3a	1150, 2190
Chenopodietea	*Chenopodion botryos* [5]	*Plantago arenaria-Brassica tournefortii* comm.[(16)]	73	2	V37	
	Chenopodion muralis	*Amarantho deflexi-Chenopodietum ambrosioidis*; *Urtico-Ecballietum elaterii*; *Chenopodietum muralis*; *Amarantho-Atriplicetum tataricae*[(17)]	71,72,74	5	V37	
	Diplotaxion erucoidis [5]	*Heliotropio-Chrozophoretum tinctoriae*; *Dittrichia graveolens* comm.[(18)]	75,76	65	V12, V15	
	Echio-Galactition tomentosae	*Hedypnois rhagadioloides-Tordylium apulum* comm.[(19)]	77	17	V32	
	Euphorbio taurinensis-Geranion lucidi	*Vicia hybrida-Astragalus hamosus* comm.[(20)]	78	2	V37	
	Geranio pusilli-Anthriscion caucalidis	*Anthriscus caucalis* comm.[(21)]	79	2	V37	
	Hordeion murini	*Hordeo-Sisymbrietum orientalis*; *Bromo-Hirschfeldietum incanae*; *Bromus diandrus* comm.; *Hordeum spontaneum* comm.[(22)]	80	17	V32	
	Malvion parviflorae [6]	*Glebionis coronaria-Malva multiflora* comm.[(23)]	81	11	V37	
Cisto-Lavanduletea stoechadis	*Hyperico olympici-Cistion cretici*	*Calicotomo-Cistetum cretici*[(24)]	11	2	S72	5420
Crataego-Prunetea	(*Prunetalia spinosae*)	*Crataegus azarolus* comm.; *Pyrus spinosa-Crataegus monogyna* comm.[(25)]	18	3	V61	5330?
	Arundo plinii-Rubion ulmifolii	*Rubus sanctus* comm.[(26)]	19	4	S35	
Crithmo-Limonietea	*Crithmo-Frankenion hirsutae*	*Crithmo-Limonietum virgati*[(27)]	65	13	N32	1240
	Crucianellion rupestris	*Brassica cretica* comm.[(28)]	66	1	N32	1240
Crypsietea aculeatae	*Cypero-Spergularion salinae*	*Crypsietum aculeatae*[(29)]	47	2	Q63	3170

Class	Alliance (Order)	Associations and comm. equivalents	Veg.type number	Number of Relevés	FloraVeg. EU	Annex I Habitat
Cymbalario-Parietarietea diffusae	*Galio valantiae-Parietarion judaicae*	*Parietarietum judaicae*[30]	70	6	U38	
Digitario sanguinalis-Eragrostietea minoris	*Euphorbion prostratae*	*Euphorbietum chamaesyco-prostratae*[31]	68	7	N35	
Epilobietea angustifolii	*Dorycnio recti-Rumicion conglomerati*	*Dorycnio recti-Caricetum otrubae*[32]	56	4	R55	6420
Festuco-Puccinellietea	*Puccinellion convolutae*	*Puccinellio festuciformis-Aeluropetum littoralis*[33]	35	5	MA253	1410
Isoëto-Nanojuncetea	*Lythrion tribracteati*	*Lythrum tribracteatum-Pulicaria vulgaris* comm.[34]	60	16	Q62	3170
	Preslion cervinae	*Ranunculus saniculifolius-Isolepis cernua* comm.[35]	59	6	Q62	3170
	Verbenion supinae	*Cypero pygmaei-Glinetum lotoidis*[36]	61	1	Q62	3170
Juncetea maritimi	*Agropyrion pungentis*	*Elytrigietum athericae*[37]	38	1	MA252	1410
	Agropyro-Plantaginion maritimi	*Schoeno-Plantaginetum maritimae*[38]	40	10	MA252	1410, 6420
	Juncion maritimi	*Juncetum maritimi*; *Puccinellio festuciformis-Juncetum subulati*; *Juncus acutus-Juncus heldreichianus* comm.[39]	36,37,39	27	MA252	1410
Molinio-Arrhenatheretea	*Trifolion maritimi*	*Ranunculo marginati-Caricetum divisae*[41]	42,43	36	MA251, R31, R32	1410, 6420
	Molinio-Holoschoenion	*Equiseto ramosissimi-Imperatetum cylindricae*[40]	41	9	N16, N1J	2240
Nerio-Tamaricetea	(*Tamaricetalia africanae*)	*Ficus carica* comm.; *Tamarix hampeana-Tamarix smyrnensis* comm.; *Elaeagnus angustifolia* comm.[42]	4,5,6	14	N1B	
	Rubo sancti-Nerion oleandri	*Rubo ulmifolii-Nerietum oleandri*; *Vinco-Viticetum agni-casti*[43]	3,7	18	S93	92D0
Nicotiano glaucae-Ricinetea communis [7]	*Nicotiano glaucae-Ricinion communis* [7]	*Opuntia ficus-indica* comm.[44]	13	2	T29	
Ononido-Rosmarinetea	*Helichryso barrelieri-Phagnalion graeci*	*Micromerio graecae-Hypericetum empetrifolii*; *Sarcopoterium spinosum-Carlina graeca* comm.[45]	9,10	35	S72	5420
Papaveretea rhoeadis	*Ridolfion segeti*	*Glebionis segetum-Ranunculus marginatus* comm.[46]	93	75	V13	
	Roemerion hybridae	*Hypericum triquetrifolium-Leontice leontopetalum* comm.[47]	92	23	V13	
	Rumicion bucephalophori	*Anchusa hybrida-Herniaria hirsuta* comm.[48]	94	81	V13	
Phragmito-Magnocaricetea	*Eleocharito palustris-Sagittarion sagittifoliae*	*Eleocharitetum palustris*[49]	53	2	Q52	3170
	Glycerio-Sparganion	*Beruletum erectae*[50]	55	2	Q52	3290
	Imperato cylindricae-Saccharion ravennae [8]	*Equiseto ramosissimi-Tripidietum ravennae*[51]	51	2	Q51	2190
	Phragmition communis	*Phragmitetum australis*; *Typhetum domingensis*[52]	50,54	7	Q51	
	(*Saccharetalia ravennae*) [9]	*Calystegio sepii-Arundinetum donacis*[53]	52	1	Q51	
	Scirpion maritimi	*Scirpetum maritimi*; *Scirpetum litoralis*[54]	48,49	9	MA252, N1J	1410, 2190
Poetea bulbosae [12]	*Romuleion graecae* [10]	*Plantagini lagopodis-Poetum bulbosae*[55]	25	12	R1D	6220
Polygono-Poetea annuae	*Polycarpion tetraphylli*	*Crassulo tillaeae-Saginetum apetalae*[56]	69	10	V34, R1D	
Potamogetonetea	*Ranunculion aquatilis*	*Ranunculo saniculifolii-Callitrichetum brutiae*[57]	58	3	P3d	
Quercetea ilicis	(*Pyro spinosae-Rubetalia ulmifolii*)	*Rosa sempervirens* comm.[58]	16	2	S35	
	Pistacio terebinthi-Rhamnion alaterni	*Olea europaea* var. *sylvestris* comm.[59]	17	1	T24	
	Quercion calliprini	*Quercus coccifera-Osyris alba* comm.[60]	14	7	S51	
	Quercion macrolepidis [11]	*Quercus *macrolepis* comm.[61]	15	2	R73, T1A	9350
Robinietea	*Balloto nigrae-Robinion*	*Ailanthus altissima* comm.[62]	12	4	T1J	
Ruppietea maritimae	*Ruppion maritimae*	*Ruppietum maritimae*[63]	29	1	P1G, P3a	1150
Saginetea maritimae	*Frankenion pulverulentae*	*Hordeum geniculatum-Hainardia cylindrica* comm.[64]	44	6	MA252, MA251	1310
	Romuleo-Saginion	*Polypogono maritimi-Hordeetum marini*[65]	45	19	MA252	1310
	Sileno sedoidis-Catapodion loliacei	*Parapholido incurvae-Silenetum sedoidis*[66]	46	1	N22	1210

Class	Alliance (Order)	Associations and comm. equivalents	Veg.type number	Number of Relevés	FloraVeg. EU	Annex I Habitat
Salicornietea fruticosae	*Arthrocnemion glauci*	*Arthrocnemo glauci-Halocnemetum strobilacei*[67]	34	5	MA253	1420
	Salicornion fruticosae	*Halimionetum portulacoidis*; *Salicornietum radicantis*[68]	33	10	MA253	1420
Stipo-Trachynietea distachyae	(*Stipo-Bupleuretalia semicompositi*)	*Asteriscus aquaticus* comm.[69]	22	5	R1F	6220
	Plantagini-Catapodion marini	*Anthemis werneri-Phleum *aegaeum* comm.[70]	23	9	N32, N35	6220
	(*Brachypodietalia distachyae*)	*Limonium sinuatum-Papaver dubium* comm.[71]	24	7	R1F	6220
Therosalicornietea	*Therosalicornion*	*Cressetum creticae*; *Suaedo maritimae-Bassietum hirsutae*; *Salsolo sodae-Suaedetum splendentis*[72]	30,31,32	13	MA253, MA252	1310
Tuberarietea guttatae [12]	(*Malcolmietalia*)	*Andryala integrifolia-Corynephorus articulatus* comm.[73]	26	1	R1F, R1R	2230
	Maresion nanae	*Phleo graeci-Maresietum nanae*[74]	28	23	N16	2230
	Tuberarion guttatae [12]	*Tuberarietum guttatae*[75]	27	12	R1R, N35	6220
Zosteretea	*Posidonion oceanicae*	*Posidonietum oceanicae*[76]	-	0	-	1120
NN	NN	*Pteridium aquilinum* comm.[77]	89	4	R54	
NN	NN	*Phyla canescens* comm.; *Carpobrotus edulis* comm.[78]	67	2	V23, V31	

Table 6. Identification key to the vegetation types of Limnos, based on traits of flora, vegetation structure, and habitat.

1	Marine seagrass meadows in coastal seas	***Posidonion oceanicae***
1*	Terrestrial, coastal or limnic vegetation	**2**
2	Woods or tall (> 2 m) scrub	**3**
2*	Low (< 1.5 m) shrubland (phrygana) or herbaceous vegetation	**17**
3	Riparian (linear) woods or scrub	**4**
3*	Non-riparian (non-linear) woods or scrub	**6**
4	Tall riparian woods	**5**
4*	Riparian scrub (*Vitex agnus-castus*, *Nerium oleander*)	***Rubo sancti-Nerion oleandri***
5	Woods along streams with *Ulmus* or *Populus*	***Lauro nobilis-Fraxinion angustifoliae***
5*	Woods along streams with *Platanus orientalis*	***Platanion orientalis***
6	Evergreen sclerophyllous woods or tall shrubland	**7**
6*	Deciduous or semi-deciduous woods, hedgerows or scrub	**8**
7	Dense, often stunted oak shrubland (*Quercus coccifera* macchia) of rocky hillsides	***Quercion calliprini***
7*	Open wild olive copse on sandy ground	***Pistacio terebinthi-Rhamnion alaterni***
8	Tall deciduous oak copses of *Quercus ithaburensis* subsp. *macrolepis* with dense or open canopies, sometimes savanna-like	***Quercion macrolepidis***
8*	Various deciduous woody vegetation, without oak trees	**9**
9	Seasonally flooded ground or with high water table	**10**
9*	Other habitat characteristics	**11**
10	*Tamarix* shrublands in saltmarsh, by estuaries and ponds	***Nerio-Tamaricetea 1***
10*	Very tall (usually > 3m) mono-dominant giant reed (*Arundo donax*) stands	***Calystegio sepii-Arundinetum donacis***
11	Urban or rural woods or succulent scrub, dominated by neophytes	**12**
11*	Woods or scrub neither by built environments nor succulent	**13**
12	*Ailanthus* and *Robinia* woods in urban or rural setting	***Balloto nigrae-Robinion***
12*	Succulent *Opuntia* scrub	***Nicotianae glaucae-Ricinion communis***
13	Dense clonal *Elaeagnus* woods, grey-leaved, on sandy flats	***Nerio-Tamaricetea 2***
13*	Orchard or dense shrub or mantle scrub or hedge, of various soils and habitats	**14**
14	Very dense, multi-stemmed unarmed *Ficus* shrubs between fields on alluvial soils and near springs	***Nerio-Tamaricetea 3***
14*	Mostly thorny or spiny scrub, hedges, mantles or orchards	**15**
15	Spiny bramble scrub (*Rubus sanctus*), 1–2 m in height, at field edges, by roads or on rubble	***Arundo plinii-Rubion ulmifolii***
15*	Other, mostly taller scrub and orchards	**16**
16	Semi-evergreen *Rosa sempervirens* curtain or mantle scrub associated with wet woodland	***Pyro spinosae-Rubetalia ulmifolii***
16*	Semi-deciduous rosaceous shrubs and orchards with *Crataegus* and *Pyrus*	***Prunetalia spinosae***

17 Coastal rocks, dunes, lagoons, saltmarshes or seasonally wet grassland **18**
17* Aquatic or terrestrial inland habitats **43**
18 Sparsely vegetated coastal rocks with, if any, sandy soil cover **19**
18* Other coastal habitats, usually with deep sand, mud or shingle **20**
19 Upper ledges of maritime cliffs, with *Brassica cretica* and/or *Matthiola incana* ..... ***Crucianellion rupestris***
19* Sea-spray exposed rock crevices, with *Crithmum*, *Limonium virgatum* and *Frankenia hirsuta* ..... ***Crithmo-Frankenion hirsutae***
20 Coastal dunes, strandlines, hindshore slacks or sandy flats **21**
20* Saltmarshes, lagoons or seasonally wet low grassland **31**
21 Coastal slopes with blown sand **22**
21* Shifting foredunes, strandlines, coastal slacks and sandflats **23**
22 Coastal phrygana of *Centaurea spinosa*, on rocks with blown sand or hindshore dunes ..... ***Helichryso barrelieri-Centaureion spinosae***
22* Ephemeral vegetation of dunefields and sands blown in gaps of coastal phrygana ..... ***Maresion nanae***
23 Strandlines, foredunes and flats with blown sands **24**
23* Fixed sandflats and humid dune slacks **27**
24 Blown sands on coastal flats and foredunes **25**
24* Vegetated strandlines on sand or shingle **26**
25 Shifting foredunes along coastline with *Pancratium maritimum* and tall grasses ..... ***Ammophilion***
25* Coastal shore flats with blown sand, without prevailing dwarf-shrubs or grasses ..... ***Centaureo cuneifoliae-Verbascion pinnatifidi***
26 Vegetated strandlines on sand ..... ***Euphorbion peplidis***
26* Vegetated coastal shingle ..... ***Sileno sedoidis-Catapodion loliacei***
27 Fixed dune grassland vegetated mainly by small to medium-sized (< 60 cm) graminoids **28**
27* (Seasonally) wet dune slacks and shores of lagoons and estuaries dominated by medium-sized to tall (> 60 cm) graminoids **29**
28 Saline grassland on fixed dunes and dry sandy flats near saline lakes and slacks, with *Schoenus nigricans* ..... ***Agropyro-Plantaginion maritimi***
28* Dry fixed dune *Imperata cylindrica* grassland sustained by brackish groundwater ..... ***Molinio-Holoschoenion***
29 Estuary shores with non-perennial freshwater inflow, with *Elytrigia atherica* ..... ***Agropyrion pungentis***
29* Seasonally wet dune slacks with brackish water dominated by tall graminoids **30**
30 Wet dune slacks with *Schoenoplectus litoralis* ..... ***Scirpion maritimi 1***
30* Groundwater-fed hindshore slacks with tall-grass reed ..... ***Imperato cylindricae-Saccharion ravennae***
31 Saltmarsh vegetation of succulent plants **32**
31* Saltmarsh of herbaceous non-succulent plants or (seasonally) wet saline low grassland **34**
32 Saltmarsh dominated by succulent subshrubs **33**
32* Saltmarshes and saline lakeshores with annual succulents (*Salicornia*, *Suaeda*, *Salsola soda*, *Cressa cretica*) ..... ***Therosalicornion***
33 *Atriplex portulacoides-Sarcocornia* mud saltmarsh ..... ***Salicornion fruticosae***
33* *Halocnemum-Arthrocnemum* vegetation in soon dried-out sand-silt saltmarsh ..... ***Arthrocnemion glaucae***
34 Long-submerged vegetation with *Ruppia* at margins of saline lagoons and coastal draining ditches ..... ***Ruppion maritimae***
34* Other saltmarsh habitat characteristics **35**
35 Saltmarsh dominated by prostrate perennial grasses (*Aeluropus*, *Puccinellia*) ..... ***Puccinellion convolutae***
35* Other saltmarsh vegetation characteristics, usually less saline **36**
36 Ephemeral vegetation dominated by small grasses in (sub)saline flats and depressions **37**
36* Permanent herbaceous vegetation of subsaline saltmarshes and seasonally wet coastal (rarely inland) grasslands **39**
37 Ephemeral patchy vegetation of tiny grasses (*Crypsis*) in subsaline depressions ..... ***Cypero-Spergularion salinae***
37* Ephemeral, mostly small-scale and patchy, grassland in mudflats and sandflats **38**
38 *Hordeum geniculatum* subhalophilous coastal or more rarely inland grassland on fine-grained, mostly silty soils ..... ***Frankenion pulverulentae***
38* Halophilous grassland on sandy soils dominated by *Polypogon maritimus* agg., *Hordeum marinum* and *Spergularia* spp. ..... ***Romuleo-Saginion***
39 Subsaline seasonally wet saltmarsh, reeds and grassland dominated by tall rushes and tall cyperaceous plants **40**
39* Subsaline seasonally wet grassland dominated by low graminoids and herbs **42**
40 Vegetation dominated by tall rushes **41**
40* Vegetation of long-wet brackwater lagoons and along coastal drainage ditches with *Bolboschoenus maritimus* ..... ***Scirpion maritimi 2***
41 Saltmarsh vegetation, more rarely inland, dominated by tussock-forming tall rushes (*Juncus acutus*, *J. heldreichianus*) ..... ***Juncion maritimi 1***
41* Saltmarsh vegetation dominated by rhizomatous tall rushes (*Juncus maritimus*, *J. subulatus*) ..... ***Juncion maritimi 2***

42 Seasonally wet grassland dominated by perennials such as *Carex divisa* and *Oenanthe* on poorly aerated soils ... ***Trifolion maritimi 1***

42* Seasonally wet grassland dominated by annual herbs, often rich in leguminous plants, usually on well-drained soils ... ***Trifolion maritimi 2***

43 Aquatic vegetation in standing waters ... **44**

43* Inland terrestrial or riparian, herbaceous or dwarf-shrub vegetation ... **45**

44 Perennial freshwater ponds in quarries with submerged aquatic plants such as white-flowered *Ranunculus* (subgen. *Batrachium*) ... ***Ranunculion aquatilis***

44* Brackish or freshwater ponds with stoneworts (*Chara galioides*) ... ***Charion canescentis***

45 Reed swamps and tall-herblands associated with running or standing waters, perennial or seasonal ... **46**

45* Other habitat and vegetation characteristics ... **50**

46 Perennial tall-herblands along streams and ditches ... **47**

46* Reed swamps, inland ... **48**

47 Riparian and water-ditch tall-herb vegetation with species such as *Epilobium hirsutum*, *Pulicaria dysenterica*, *Carex otrubae* ... ***Dorycnio recti-Rumicion conglomerati***

47* Herblands along streams with emergent helophytes such as *Berula erecta* ... ***Glycerio-Sparganion***

48 Small-reed vegetation with *Eleocharis palustris* in swampy sites with fluctuating water-level ... ***Eleocharito palustris-Sagittarion sagittifoliae***

48* Tall-reed vegetation by brackish and freshwater ditches and at ponds ... **49**

49 Reed swamps with Common Reed (*Phragmites australis*), often extensive ... ***Phragmition communis* 1**

49* Reed swamps with *Typha domingensis*, mostly small areas ... ***Phragmition communis* 2**

50 On seasonally wet, just dried-up soil of vernal ponds, stream and reservoir banks and depressions in grassland or cultivated land, usually small-scale, dominated by small plants (procumbent or, if not, < 15 cm tall) ... **51**

50* Other habitats, vegetation of mostly taller plants ... **53**

51 Vernal (plant optimum in April-May), on just dried-up soil ... **52**

51* Aestival-autumnal (plant optimum in late summer), on sandy-silty ground of late dried-up reservoir banks, with *Glinus lotoides* and *Cyperus michelianus* subsp. *pygmaeus* ... ***Verbenion supinae***

52 Shallow seasonal pools and pond shores with sandy soil or shingle, characterized by *Isolepis cernua* or *Myosurus heldreichii* ... ***Preslion cervinae***

52* Temporarily wet field edges and depressions in seasonally wet grassland on alluvial, loamy or silty-sandy soil ... ***Lythrion tribracteati***

53 Open heathland (phrygana) dominated by low shrubs, on hillsides, summits and flats ... **54**

53* Other vegetation characteristics ... **56**

54 Mature phrygana with several low-shrub species ... **55**

54* Immature spinose phrygana with *Sarcopoterium spinosum* as monodominant dwarf-shrub ... ***Helichrysae barrelieri-Phagnalion graeci 1***

55 More or less dense phrygana on igneous or sedimentary bedrock, with *Thymbra capitata* and *Anthyllis hermanniae* ... ***Helichrysae barrelieri-Phagnalion graeci 2***

55* Usually open phrygana with mostly non-spinose plants such as *Cistus creticus* and *Cistus salviifolius* on sandy or shaly soil, mostly over alluvium or Pleistocene sandstone ... ***Hyperico olympici-Cistion cretici***

56 Dry grassland and rocks ... **57**

56* Roadsides, cultivated land, built and other human-made environments ... **64**

57 Vegetated rock crevices ... **58**

57* Dry grassland rich in annual and perennial herbs ... **59**

58 Damp rock crevices by streams ... ***Adiantion***

58* Volcanic rock crevices and ledges ... ***Polygonion icarici***

59 Sparsely to densely vegetated annual-rich grasslands and herblands on well-drained sandy or gravelly soil ... **60**

59* Rather dense and low, usually heavily sheep-grazed, grasslands on shallow skeletal loamy soils with a mixture of perennial, often mat-forming, and annual plants ... ***Romuleion graecae***

60 Dry halo-nitrophilous grasslands on cliff tops, marine embankments and other sites exposed to sea-spray on sandy soils or shingle ... ***Plantagini-Catapodion marini***

60* Dry grasslands not or hardly influenced by sea-spray ... **61**

61 Sparsely vegetated, pronouncedly xeric herblands on skeletal, rather fertile soils over volcanic and sedimentary rocks ... **62**

61* Ephemeral vegetation on dry poor sandy soils, often disturbed by rabbits ... **63**

62 Xeric annual-rich open vegetation on compacted loams, sands and gravel, with *Asteriscus aquaticus*, mostly near the sea ... ***Stipo-Bupleuretalia semicompositi***

62* Xeric annual-rich vegetation on skeletal soils, with *Limonium sinuatum*, usually on grazed ground ... ***Brachypodietalia distachyae***

63 Ephemeral vegetation on shallow sandy and base-poor soils with *Tuberaria guttata* ... ***Tuberarion guttatae***

63* Ephemeral dry grassland on deep sands with *Corynephorus articulatus* ... ***Malcolmietalia***

64 Amenity grassland and abandoned horticultural sites near the sea and in urban setting, dominated by once planted and irrigated, now established neophytes ... **NN**

64* Other habitat characteristics ... **65**

65 Constantly trampled sites ... **66**
65* Other habitat characteristics ... **67**
66 Permanent swards with *Cynodon dactylon* and summer-ephemeral plants such as *Euphorbia* subgen. *Chamaesyce*, on disturbed sands and gravel, by car parks, eroded coastal sites and urban lawns ... ***Euphorbion prostratae***
66* Spring-ephemeral sparse vegetation on pavement, tracks and heavily trampled or grazed wet-dry shallow soils ... ***Polycarpion tetraphylli***
67 Arable land, cultivated or harvested fields or gardens ... **68**
67* (Sub)ruderal habitats outside arable fields and gardens ... **72**
68 Vernal arable vegetation of winter crops (cereals and pulses) ... **69**
68* Aestival and autumnal arable vegetation of stubble fields, temporarily irrigated gardens and summer crops (beans, melons, maize, sorghum) ... **71**
69 Arable fields and fallows on sandy soils, dry or wet-dry, but usually well-drained ... ***Rumicion bucephalophori***
69* Arable land with deep loamy or skeletal, often shallow soils ... **70**
70 Arable fields with skeletal soils, on base-rich igneous or sedimentary bedrock ... ***Roemerion hybridae***
70* Arable fields and rotation fallows on deep loamy, often wet-dry soils, often dominated by *Glebionis segetum* ... ***Ridolfion segeti***
71 Arable vegetation of irrigated fields, vineyards, and kitchen gardens, usually with species of *Amaranthus*, *Heliotropium* and *Solanum* ... ***Diplotaxion erucoidis 1***
71* Stubble fields or summer crop fields at and after harvest ... ***Diplotaxion erucoidis 2***

72 Vegetation of (sub)ruderal habitats with annual plants prevailing ... **73**
72* Vegetation of (sub)ruderal habitats with biennial or perennial plants prevailing ... **81**
73 Aestival-autumnal (plant flowering optimum in [June-]July-September) ruderal vegetation with summer-annual chenopods (*Chenopodium* s.l., *Atriplex*) in and around villages and by outlying farms (mandras) ... **74**
73* Vernal (optimum flowering in April-May) (sub)ruderal winter-annual vegetation ... **76**
74 Ruderal vegetation of damp nutrient-rich sites such as gutters, with *Dysphania ambrosioides* ... ***Chenopodion muralis 1***
74* Dry ruderal nutrient-rich sites with summer-annual plants ... **75**
75 Vegetation with *Ecballium elaterium* and other robust summer-annual plants in villages and on organic waste by fields ... ***Chenopodion muralis 2***
75* Vegetation with chenopods such as *Atriplex tatarica*, *Salsola squarrosa*, *Chenopodium betaceum*) on ammonia-rich soils by farms ... ***Chenopodion muralis 3***
76 (Sub)ruderal herblands of low to medium-sized annual plants, usually < 50 cm tall ... **77**
76* (Sub)ruderal herb- and grasslands of medium-sized to tall robust annual plants, usually > 60 cm (though sometimes lower due to trampling) ... **80**
77 Ruderal annual springtime vegetation on disturbed sandy soils or at (the base of) walls, commonly in (semi-)shade ... **78**
77* Species-rich subruderal annual low herblands on loamy soils, in the open or in semi-shade ... **79**
78 Mesic subnitrophilous vegetation with *Parietaria judaica* in semi- or full shade in towns and villages, often at the bottom or in clefts of walls ... ***Galio valantiae-Parietarion judaicae***
78* Dry ruderal (disturbed by rabbits) herblands with *Anthriscus caucalis* in the open or in semi-shade (such as *Elaeagnus* canopy) on sandy soils ... ***Geranio pusilli-Anthriscion caucalidis***
79 Low annual herblands on dry soils, commonly with subnitrophilous plants such as *Tordylium apulum*, *Hedypnois rhagadioloides*, *Urospermum picroides*, in abandoned pastures and along tracks ... ***Echio-Galactition tomentosae***
79* Low annual herblands on mesic soils, often in semi-shade, rich in legumes such as *Vicia hybrida*, *Lotus ornithopodioides*, *Astragalus hamosus* ... ***Geranio-Cardaminetalia***
80 (Sub)ruderal annual dry grasslands along roads and dry walls or between fields, dominated by medium-sized grasses such as wild barleys and oats (*Hordeum* spp., *Avena* spp.), *Aegilops* spp., *Dasypyrum villosum* or *Bromus diandrus* ... ***Hordeion murini***
80* Medium-sized to tall nitrophilous annual herblands with *Glebionis coronaria* and *Malva* spp., in villages, by sheds, abandoned sheep pens and dry waste places ... ***Malvion parviflorae***
81 Perennial vegetation of disturbed coastal and inland habitats such as roadsides, eroded hillsides and field edges, dominated by tall herbs and grasses, subshrubs or bracken ... **82**
81* Perennial vegetation dominated by thistles and other armed or unpalatable herbs and subshrubs, in nutrient-rich habitats such as overgrazed pastures, old-fields, terrace walls and livestock shelters ... **85**
82 Perennial grass-dominated vegetation on disturbed sands, at road verges and abandoned fields ... **83**
82* Tall perennial vegetation dominated by herbs or bracken (*Pteridium*), of nutrient-rich roadsides or somewhat damp hillsides ... **84**
83 Subruderal perennial vegetation of abandoned pastures, field margins and along roads, usually on loamy ground, dominated by *Hordeum bulbosum* or *Piptatherum miliaceum* ... ***Bromo-Oryzopsion miliaceae 1***
83* Terrestrial reed vegetation on disturbed sandy open ground, sand embankments and fixed dunes, dominated by *Phragmites frutescens* ... ***Bromo-Oryzopsion miliaceae 2***

84 Species-rich vegetation of perennial and annual tall herbs of roadsides and field edges, with flowering maxima from late spring through most of summer ..... ***Bromo-Oryzopsion miliaceae 3***

84* Fern (*Pteridium*)-dominated vegetation on somewhat damp eroded and deforested valleys and hillsides over sandstone and marl ..... **NN**

85 Ruderal vegetation of old-fields and abandoned pastures, often dominated by robust subshrubs and herbs woody at base **86**

85 Ruderal vegetation of rocky waysides, collapsed terrace walls, overgrazed pastures, dry wasteland, around livestock shelters and pens, dominated by tall hemicryptophytes or geophytes, often rich in thistles **87**

86 Ruderal vegetation of old-fields and field margins, often dominated by *Dittrichia viscosa*, mostly on deep sandy or loamy soils ..... ***Inulo viscosae-Agropyrion repentis***

86* Ruderal vegetation dominated by unpalatable herbs (*Euphorbia characias*) and/or subshrubs (*Ballota acetabulosa*, *Cionura erecta*) of abandoned, previously overgrazed pastures, mostly on skeletal or rocky soils on igneous hillsides and summits ..... ***Asphodeletalia ramosi 1***

87 Dry nitrophytic perennial vegetation of heavily overgrazed rocky pastures on skeletal or rocky, mostly shallow soils **88**

87* Mesic to moderately dry nitrophytic robust annual, biennial and perennial vegetation of rural environments, by villages and waste ground, with seasonally moist nutrient-rich earth, rock and rubbish fills **89**

88 Thistle-dominated dryland vegetation ..... ***Onopordion illyrici***

88* Overgrazed, or since abandoned, pastures and pens dominated by *Asphodelus ramosus* or *Ferula communis* ..... ***Asphodeletalia ramosi 2***

89 Tall-herb vegetation of moderately dry to mesic ruderal habitats in and by villages and outlying farms, with *Conium maculatum*, *Rubia tinctorum* or *Rumex cristatus* ..... ***Balloto-Conion maculati***

89* Tall-herb vegetation in pronouncedly nutrient-rich and seasonally moist habitats by earth fills, wells and cisterns, with mesophilous plants such as *Silybum marianum* and *Urtica pilulifera* ..... ***Silybo mariani-Urticion piluliferae***

Table 7. Total and indicator species pools of defined habitats (class groups). 1, Wet wood and scrub; 2, Dry wood and mantle scrub; 3, Phrygana; 4, Dry grassland and rocks; 5, Lagoons and variously dry or seasonally wet coastal hinterland vegetation; 6, Dunes, strandlines and coastal rock; 7, Reeds and non-coastal aquatic and wet-dry sites; 8, Cultivated fields, fallows and gardens; 9, Urban and trampled habitats; 10, Rural pasture and roadside habitats.

Class group	1	2	3	4	5	6	7	8	9	10
Number of relevés	37	25	37	54	144	84	54	244	47	149
Number of species recorded*	171	150	327	306	309	124	143	382	165	415
Number of indicator species	20	33	54	115	69	42	40	76	23	88
Proportion of indicator species (%)	11.7	22.0	16.5	37.6	22.3	33.9	28.0	19.9	13.9	21.2

* Note that, due to many non-exclusive species, the number of recorded species of all class groups exceeds by far the total number of recorded species.

The proportion of indicator species per class group varied mostly between 11% and 22% of the overall number of recorded species in the respective groups. Three vegetation class groups were more distinct with a higher share of indicator species, namely (7) Reeds and non-coastal aquatic and wet-dry sites (28.0%), (6) Dunes, strandlines and coastal rock (33.9%), and (4) Dry grassland and rocks (37.6%) (Table 7). These groups comprise plant communities of largely azonal habitats which are rare or local on the island, specifically the classes *Adiantetea*, *Ammophiletea*, *Asplenietea trichomanis*, *Charetea intermediae*, *Crithmo-Limonietea*, *Isoëto-Nanojuncetea*, *Phragmito-Magnocaricetea* and *Potamogetonetea*, as well as some communities of the *Stipo-Trachynietea* and *Tuberarietea guttatae*. Although many of the relevant relevés allocated to these classes were not species-rich, in their entirety they represent very distinct habitats with unique species combinations.

It should also be emphasized that pronouncedly anthropogenic (urban, ruderal, agrestal) habitats and their vegetation (class groups 8, 9 and 10) harbour substantial parts of the island's species pool, with 187 species or more than 21% of the recorded species being almost exclusive to these human-made types of vegetation.

Discussion

New or confirmed Hellenic vegetation types

Most of the 103 vegetation types found on the island of Lemnos, corresponding to 77 vegetation alliances and 36 classes, are wellknown to occur in Greece, southern Europe and beyond (but their regional distribution within the country is much less well-known). However, the occurrences of four alliances were hitherto considered uncertain for Greece as a whole (Preislerová et al. 2022): *Agropyro-Plantaginion maritimae*, *Balloto-Conion maculati*, *Galio valantiae-Parietarion judaicae*, and *Preslion cervinae*. No less than 12 alliances (or higher-rank equivalents) were not previously substantiated for Greece and

the Aegean: *Agropyrion pungentis*, *Charion canescentis*, *Chenopodion botryos*, *Crucianellion rupestris*, *Diplotaxion erucoidis* (detailed by Rinne et al. 2025), *Frankenion pulverulentae*, *Geranio pusilli-Anthriscion caucalidis*, *Lythrion tribracteati*, *Malcolmietalia*, *Robinietea*, *Trifolion maritimi* and *Tuberarion guttatae*. Records of the zonal *Quercion calliprini* macchia are the first in the North Aegean. Most of the newly recorded or confirmed alliances belong to saltmarsh, coastal, dry grassland or human-associated vegetation. New records of anthropogenic vegetation reflect, first, the diversity of these habitats on the island and, second, the relative neglect of such habitats in vegetation surveys in Greece (rather than their overall rarity; Panitsa et al. 2020).

Relatively better known (due to regular monitoring on a national scale) are many alliances corresponding to habitat types of Annex I of the EU Habitats Directive. Seventeen protected Annex I Habitat Types have been known to occur in the Natura 2000 Site GR4110001 (Limnos: Chortarolimni-Limni Alyki kai Thalassia Periochi) (Tsiripidis et al. 2025). They are represented in the Site area by 27 alliances (Table 8). Another 9 protected Habitat Types occur elsewhere on the island, with further 15 associated alliances, some of them covered by the Special Protected Area GR4110006, while some are not.

Identification key to vegetation types

Keys to phytosociological vegetation types are surprisingly rare in literature. Those that exist refer to entire countries (Schubert et al. 2009) or are restricted to certain formations (Willner and Grabherr 2007). A key to Annex I Habitat Types of Greece has been just published (Tsiripidis et al. 2025). To my knowledge, the key of the vegetation types of Lemnos provided in this paper is the first of

Table 8. EU Habitats Directive Annex I Habitat Types (European Commission 2013) on the island of Lemnos and in its Natura 2000 Sites (N2000) with vegetation alliances associated to the Habitat Types. X if in N2000 Site; Xx if both in and outside N2000 Site; nc, Habitat Type disregarded in the present study. National Habitat Types remained disregarded. *indicates a priority Habitat Type. For Habitat Types known from the N2000 Site of Lemnos see also Tsiripidis et al. (2025).

Habitat Type (code)	Occurrence in N2000 confirmed	New to the island	Associated vegetation alliances (or higher-rank equivalent) in the study area (terms abbrev.)
1110 Sandbanks ...	nc		-
1120 **Posidonia* beds ...	X		*Posidonion oceanicae*
1150 *Coastal lagoons		X	*Ruppion*, *Charion intermediae*
1170 Reefs	nc		-
1210 Annual vegetation of drift lines	Xx		*Euphorbion peplidis*, *Sileno-Catapodion*
1240 Vegetated sea cliffs of the Mediterranean coasts ...	Xx		*Crithmo-Frankenion*, *Crucianellion rupestris*
1310 *Salicornia* and other annuals ...	Xx		*Thero-Salicornion*, *Romuleo-Saginion*, *Frankenion pulverulentae*
1410 Mediterranean salt meadows ...	Xx		*Juncion maritimi*, *Trifolion maritimi* p.p., *Puccinellion convolutae*, *Agropyrion pungentis*, *Agropyro-Plantaginion* p.p., *Scirpion maritimi* p.p.
1420 Mediterranean ... halophilous scrubs ...	Xx		*Arthrocnemion glauci*, *Salicornion fruticosae*
2110 Embryonic shifting dunes	Xx		*Ammophilion*
2120 Shifting dunes ... with *Ammophila* ...	Xx		*Ammophilion*
2190 Humid dune slacks	X		*Scirpion maritimi* p.p., *Charion intermediae* p.p., *Imperato-Saccharion*
2220 Dunes with *Euphorbia terracina*		Xx	*Centaureo-Verbascion pinnatifidi*
2230 *Malcolmietalia* dune grasslands		Xx	*Maresion nanae*, *Malcomietalia* (*Corynephorus* comm.)
2240 *Brachypodietalia* dune grasslands ...		Xx	*Juncetea maritimi* (*Imperata cylindrica* comm.)
2260 *Cisto-Lavenduletalia* dune sclerophyllous scrubs	Xx		*Helichryso-Centaureion spinosae*
3170 *Mediterranean temporary ponds	Xx		*Preslion cervinae*, *Lythrion tribracteati*, *Verbenion supinae*, *Cypero-Spergularion salinae*
3290 Intermittently flowing Mediterranean rivers ...	Xx		*Glycerio-Sparganion p.p.*
5420 *Sarcopoterium spinosum* phryganas	Xx		*Helichryso barrelieri-Phagnalion graecae*, *Hyperico olympici-Cistion cretici*
6220 *Pseudo-steppe ... of the *Thero-Brachypodietea*		Xx	*Romuleion*, *Stipo-Bupleuretalia*, *Brachypodion distachyae*, *Plantagini-Catapodion*, *Tuberarion guttatae*
6420 Mediterranean tall humid grasslands ...	X		*Trifolion maritimi* p.p., *Dorycnio-Rumicion*, *Agropyro-Plantaginion* p.p.
8220 Siliceous rocky slopes ...		x	*Polygonion icarici*
9350 *Quercus macrolepis* forests	Xx		*Quercion macrolepidis*
92A0 *Salix alba* and *Populus alba* galleries		x	*Lauro nobilis-Fraxinion angustifoliae*
92C0 *Platanus orientalis* and *Liquidambar* woods ...		x	*Platanion orientalis*
92D0 Southern riparian galleries and thickets ...		x	*Rubo sancti-Nerion oleandri*

its kind for a Mediterranean island or region. Making the outcome of vegetation surveys and the vegetation types accessible via keys or formalized definitions is essential for both basic and applied purposes, such as landscape mapping, vegetation monitoring, potential species area identification, conservation planning (hot-spot identification, priority tasking) and conservation management. The key to the vegetation types of Lemnos in this article serves a dual purpose, to help recognizing and identifying the classified vegetation types in the field and to provide brief descriptions of the vegetation types. It is designed to make all vegetation types recorded identifiable by means of environmental conditions, prevailing species and structural properties typically encountered in the stands pertaining to the island of Lemnos. The key (or parts of it) may well be applicable beyond the studied island, but clearly dependent on the biogeographic and ecological context. On other Aegean islands and mainland areas other vegetation types are to be expected whereas others that were found on Lemnos may be missing. The present key and the phytosociological synoptic tables included in the paper may also form a basis for formalized definitions of vegetation types, by means of the underlying differential species groups. Formalized definitions remain as yet to be worked out for the Aegean, Greece and the Mediterranean.

Habitat-related species pools

While the flora and species richness of the Aegean islands are fairly well-known (Strid 2016), thorough floristic surveys can still reveal a great number of new records as has been exemplified for the islands of Samothraki (Biel and Tan 2014), Rodos (Kleinsteuber et al. 2016), Lemnos (Bergmeier et al. 2021) and Sifnos (Cattaneo and Grano 2024). However, the habitat-related species pools of the Aegean islands were not yet studied in detail, despite the meritorious early works by Rechinger (1929), Rauh (1949) and Rechinger and Rechinger-Moser (1951). They provided for the first time non-exhaustive species lists for very broadly circumscribed habitats. Rauh (1949), when describing the vegetation conditions of Lemnos, distinguished between coastal, saltmarsh, macchia, phrygana, dry grassland, riparian, ruderal and cliff-dwelling plants. Since then, the island's flora has become much better known (Panitsa et al. 2003; Bergmeier et al. 2021), but the full range of habitats, and which plant species occur in certain vegetation types, is addressed here for the first time.

Many species found as indicative for certain vegetation types or one of the 10 defined habitat groups are potential character species of certain classes or subordinate vegetation types. Their local diagnostic value at class level was compared with the Diagnostic Species of Classes of the European Vegetation (DSCEV, published together with the EuroVegChecklist by Mucina et al. 2016 and recently used for the compilation of the FloraVeg.EU, Chytrý et al. 2024), an inventory which had hardly been tested for its general validity in understudied regions. With the limited evidence from the vegetation of Lemnos alone, however, a comparison with the DSCEV assignments would not be well-founded. I have therefore refrained from supplementing the DSCEV, but, apart from a high degree of consistency with the DSCEV, a large number of species was found that were classified in a different vegetation class or other classes than in the DSCEV, as well as many species not listed in the DSCEV.

The most species-rich habitats of the island, or groups of habitats, were the grazed, often heavily disturbed and ruderalized pasturelands, the regularly disturbed habitats of cultivated fields, fallows and gardens, further the rangelands with phrygana and dry rocky grasslands and the seasonally wet or variously dry saltmarsh and coastal hinterland habitats. These are widespread and rather common habitats on the island. The habitats with the highest degree of habitat-dependent and rare species were the dry rocky grasslands and inland cliffs, the coastal dunes and rocks and the permanently or seasonally wet areas. These are localized, infrequent and often small-scale habitats. In order to preserve the plant community diversity of the entire island it is therefore not enough to protect only the most remote eastern coastal areas of the island (as the current Natura 2000 Site is defined); rather a two-pronged approach to nature conservation is required. Protection must focus on local hot-spots, especially small wetlands such as springs, ponds, lagoons and water courses, as well as on the farmed landscapes of the island, including livestock farming and the agricultural systems with traditional practices, landraces and products as described in detail by Bebeli and Thanopoulos (2024).

Data availability

The original data collected and used for the present study are stored in the author's Turboveg archive and will be made accessible in full by the author upon request. The relevé data underlying this paper are provided in the Suppl. materials 5–8. Provision is made for incorporation in the European Vegetation Archive (EVA). Plant specimens are currently stored in the author's herbarium at GOET.

Acknowledgements

S. Meyer (2018–2022, 2024) and L. Rinne (2025), both Göttingen, assisted with sampling and other fieldwork. U. Bergmeier provided most of the photographs. L. Rinne made the map used in Figure 1. M. Erben, Munich, identified specimens of *Limonium* and *Goniolimon* from Lemnos. U. Raabe identified *Chara galioides*. The MedINA team financed part of the travel expenses and provided logistical support. The research and managing teams, specifically G. Dimitropoulos, S. Meyer, M. Panitsa and F. Sakellarakis made the extensive fieldwork a pleasure. I am very grateful to all of them as well as for the work of the voluntary language editor Lynda Weekes. I acknowledge support by the Open Access Publication Funds of the Göttingen University.

References

Bebeli P, Thanopoulos R [Eds] (2024) The plant wealth of Lemnos. MedINA, Athens, GR, 298 pp.

Bergmeier E (2020) Die Vegetation Deutschlands—Eine vergleichende Übersicht der Klassen, Ordnungen und Verbände auf Grundlage der EuroVegChecklist. Tuexenia 40: 19–32.

Bergmeier E, Raus T (1999) Verbreitung und Einnischung von Arten der *Isoëto-Nanojuncetea* in Griechenland. Mitteilungen des Badischen Landesvereins für Naturkunde und Naturschutz 17: 463–479.

Bergmeier E, Ristow M, Krause J, Meyer S, Panitsa M (2021) Phytodiversity of Limnos (North Aegean, Greece)—An update and evaluation. Flora Mediterranea 31: 233–246. https://doi.org/10.7320/flmedit31.233

Biel B, Tan K (2014) Flora of Samothraki. The Goulandris Natural History Museum, Athens, GR, 224 pp.

Biondi E, Blasi C, Allegrezza M, Anzellotti I, Azzella MM, Carli E, Casavecchia S, Copiz R, Del Vico E, … Zivkovic L (2014) Plant communities of Italy: The vegetation prodrome. Plant Biosystems 148: 728–814. https://doi.org/10.1080/11263504.2014.948527

Bohn U, Neuhäusl R (2002) Map of the natural vegetation of Europe. Scale 1:2,500,000. Legend and Maps. Bundesamt für Naturschutz, Bonn, DE, 153 pp. and 10 maps.

Brullo S, Giusso del Galdo G (2003) La classe *Saginetea maritimae* in Italia. Fitosociologia 40(2): 29–41.

Brullo S, Guarino R (1998) Syntaxonomy of the *Parietarietea judaicae* class in Europe. Annali di Botanica 56: 109–146.

Brullo S, Giusso del Galdo G, Guarino R, Minissale P, Spampinato G (2007) A survey of the weedy communities of Sicily. Annali di Botanica N.S. 7: 127–161.

Brullo S, Brullo C, Cambria S, Giusso del Galdo G (2020) The vegetation of the Maltese Islands. Springer, Cham, CH. https://doi.org/10.1007/978-3-030-34525-9_6

Cattaneo C, Grano M (2024) Checklist updating and analysis of the flora of Sifnos Island and Kitriani Islet (Kiklades, Greece) with new noteworthy floristic records. Flora Mediterranea 34: 95–111. https://doi.org/10.7320/flmedit34.095

Chytrý M, Řezníčková M, Novotný P, Holubová D, Preislerová Z, Attorre F, Biurrun I, Blažek P, Bonari G, … Axmanová I (2024) FloraVeg.EU – an online database of European vegetation, habitats and flora. Applied Vegetation Science 27: e12798. https://doi.org/10.1111/avsc.12798

Costa JC, Neto C, Aguiar C, Capelo J, Espírito Santo MD, Honrado J, Pinto-Gomes C, Monteiro-Henriques T, Sequeira M, Lousã M (2012) Vascular plant communities in Portugal (Continental, The Azores and Madeira). Global Geobotany 2: 1–180.

Dierschke H (1994) Pflanzensoziologie: Grundlagen und Methoden. Ulmer, Stuttgart, DE, 683 pp.

Díez-Garretas B, Asensj A, Gavilán R (2003) Sabulicolous therophytic plant communities in the Mediterranean Region: A proposal of phytosociological synthesis. Phytocoenologia 33: 495–526. https://doi.org/10.1127/0340-269x/2003/0033-0495

Dimopoulos P, Raus T, Bergmeier E, Constantinidis T, Iatrou G, Kokkini S, Strid A, Tzanoudakis D (2013) Vascular plants of Greece: An annotated checklist. Englera 31: 1–372. https://doi.org/10.3372/en.31

ELSTAT [Ellinikí Statistikí Archí] (2011) Statistical Yearbook of Greece 2009 & 2010. Pireas, GR [in Greek].

European Commission (2013) Interpretation Manual of European Union Habitats, ver. EUR 28. European Commission, DG Environment, Brussels, BE, 144 pp. https://eunis.eea.europa.eu/references/2435

García-Madrid AS, Rodríguez-Rojo MP, Cantó P, Molina JA (2016) Diversity and classification of tall humid herb grasslands (*Molinio-Holoschoenion*) in Western Mediterranean Europe. Applied Vegetation Science 19: 736–749. https://doi.org/10.1111/avsc.12249

Georgiadis NM, Dimitropoulos G, Avanidou K, Bebeli P, Bergmeier E, Dervisoglou S, Dimopoulos T, Grigoropoulou D, Hadjigeorgiou I, … Kizos T (2022) Farming practices and biodiversity: Evidence from a Mediterranean semi-extensive system on the island of Lemnos (North Aegean, Greece). Journal of Environmental Management 303: Article 114131. https://doi.org/10.1016/j.jenvman.2021.114131

Greuter W (1991) Botanical diversity, endemism, rarity, and extinction in the Mediterranean area: An analysis based on the published volumes of Med-checklist. Botanika Chronika 10: 63–79.

Hennekens SM, Schaminée JHJ (2001) TURBOVEG, a comprehensive data base management system for vegetation data. Journal of Vegetation Science 12: 589–591. https://doi.org/10.2307/3237010

Higgins MD, Higgins R (1996) A geological companion to Greece and the Aegean. Duckworth, London, UK, 240 pp.

HNMS [Hellenic National Meteorological Service] (2023) Greece weather. https://www.emy.gr/en [accessed 1 Sep 2025]

Iemelianova S, Dítě D, Dítě Z, Willner W, Bergmeier E, Pérez-Haase A, Dziuba T, Aćić S, Ćuk M, … Chytrý M (2025) Annual vegetation of saline seasonal wetlands (*Crypsietea aculeatae*) in Europe. Applied Vegetation Science 28: e70044. https://doi.org/10.1111/avsc.70044

IGME [Institute of Geology and Mineral Exploration] (1993) Geological Map of Greece 1:50,000. Limnos Island. Athens, GR.

Kent M (2012) Vegetation description and data analysis. A practical approach. 2nd ed. Wiley-Blackwell, Chichester, UK, 414 pp.

Kleinsteuber A, Ristow M, Hassler M [Eds] (2016) Flora von Rhodos und Chalki. Vol 1. Kleinsteuber Books, Karlsruhe, DE, 608 pp.

Kottek M, Grieser J, Beck C, Rudolf B, Rubel F (2006) World Map of the Köppen-Geiger climate classification updated. Meteorologische Zeitschrift 15: 259–263. https://doi.org/10.1127/0941-2948/2006/0130

Kouka O (2002) Siedlungsorganisation in der Nord- und Ostägäis während der Frühbronzezeit (3. Jt. v.Chr.). Dissertation Universität Heidelberg 1996, Internationale Archäologie 58. VML Verlag Marie Leidorf, Rahden/Westf., DE.

Landucci F, Šumberová K, Tichý L, Hennekens S, Aunina L, Biță-Nicolae C, Borsukevych L, Bobrov A, Čarni A, … Chytrý M (2020) Classification of the European marsh vegetation (*Phragmito-Magnocaricetea*) to the association level. Applied Vegetation Science 23: 297–316. https://doi.org/10.1111/avsc.12484

Marcenò C, Guarino R, Loidi J, Herrera M, Isermann M, Knollová I, Tichý L, Tzonev RT, Acosta ATR, … Chytrý M (2018) Classification of European and Mediterranean coastal dune vegetation. Applied Vegetation Science 21: 533–559. https://doi.org/10.1111/avsc.12379

Marcenò C, Danihelka J, Dziuba T, Willner W, Chytrý M (2024) Nomenclatural revision of the syntaxa of European coastal dune vegetation. Vegetation Classification and Survey 5: 27–37. https://doi.org/10.3897/VCS.108560

Médail F (2017) The specific vulnerability of plant biodiversity and vegetation on Mediterranean islands in the face of global change. Regional Environmental Change 17: 1775–1790. https://doi.org/10.1007/s10113-017-1123-7

Mucina L, Bültmann H, Dierßen K, Theurillat J-P, Raus T, Čarni A, Šumberová K, Willner W, Dengler J, … Tichý L (2016) Vegetation of Europe: Hierarchical floristic classification system of vascular plant, bryophyte, lichen, and algal communities. Applied Vegetation Science 19(Suppl. 1): 3–264. https://doi.org/10.1111/avsc.12257

Ninot JM, Font X, Masalles RM, Vigo J (2010–2011) Syntaxonomic conspectus of the vegetation of Catalonia and Andorra. II: Ruderal communities. Acta Botanica Barcinonensia 53: 113–189.

Panitsa M, Snogerup B, Snogerup S, Tzanoudakis D (2003) Floristic investigation of Lemnos Island (NE Aegean Area, Greece). Willdenowia 33: 79–105. https://doi.org/10.3372/wi.33.33108

Panitsa P, Iliadou E, Kokkoris I, Kallimanis A, Patelodimou C, Strid A, Raus T, Bergmeier E, Dimopoulos P (2020) Distribution patterns of ruderal plant diversity in Greece. Biodiversity and Conservation 29: 869–891. https://doi.org/10.1007/s10531-019-01915-4

Paximadas S (2024) The reputation of local products in antiquity. In: Bebeli P, Thanopoulos R (Eds) The plant wealth of Lemnos. MedINA, Athens, GR, 36–37.

Preislerová Z, Jiménez-Alfaro B, Mucina L, Berg C, Bonari G, Kuzemko A, Landucci F, Marcenò C, Monteiro-Henriques T, … Chytrý M (2022) Distribution maps of vegetation alliances in Europe. Applied Vegetation Science 25: e12642. https://doi.org/10.1111/avsc.12642

Rauh W (1949) Klimatologie und Vegetationsverhältnisse der Athos-Halbinsel und der ostägäischen Inseln Lemnos, Evstratios, Mytiline und Chios. Sitzungsberichte der Heidelberger Akademie der Wissenschaften, Mathematisch-Naturwissenschaftliche Klasse, [1949]: 511–615. https://doi.org/10.1007/978-3-662-22066-5_1

Rechinger KH (1929) Beitrag zur Kenntnis der Flora der Ägäischen Inseln und Ost-Griechenlands. Annalen des Naturhistorischen Museums in Wien 43: 269–340.

Rechinger KH (1943) Flora aegaea. Flora der Inseln und Halbinseln des ägäischen Meeres. Denkschriften der Akademie der Wissenschaften, Mathematisch-Naturwissenschaftliche Klasse 105(1): 1–924.

Rechinger KH, Rechinger-Moser F (1951) Phytogeographia aegaea. Denkschriften der Österreichischen Akademie der Wissenschaften, Mathematisch-Naturwissenschaftliche Klasse 105(2,2): 1–208.

Rinne L, Meyer S, Bergmeier E (2025) Soil and season shape less intensively managed agro-ecosystems of a Mediterranean island—Insights from Lemnos (Greece). Vegetation Classification and Survey 6: 253–271. https://doi.org/10.3897/VCS.164437

Ristow M, Panitsa M, Meyer S, Bergmeier E (2022) Factors of detection deficits in vascular plant inventories—An island case study. Diversity 14: 303. https://doi.org/10.3390/d14040303

Rivas-Martínez S, Fernández-González F, Loidi J (1999) Checklist of plant communities of Iberian Peninsula, Balearic and Canary Islands to suballiance level. Itinera Geobotanica 13: 353–451.

Rivas-Martínez S, Díaz TE, Fernández-González F, Izco J, Loidi J, Lousã M, Penas Á (2002) Vascular plant communities of Spain and Portugal. Addenda to the syntaxonomical checklist of 2001. Part II. Itinera Geobotanica 15: 433–922.

Schubert R, Hilbig W, Klotz S (2009) Bestimmungsbuch der Pflanzengesellschaften Deutschlands. Spektrum Akademischer Verlag, Heidelberg, DE, 472 pp. https://doi.org/10.1007/978-3-8274-2585-0

Strid A (2016) Atlas of the Aegean Flora. Part 1: Text and Plates; Part 2: Maps. Englera 33: 1–700.

Terzi M, Fernández-González F, Di Pietro R, Theurillat J-P (2023) Phytosociological nomenclature of the class names *Helianthemetea guttati*, *Poetea bulbosae* and *Stipo giganteae-Agrostietea castellanae*. Plant Biosystems. https://doi.org/10.1080/11263504.2023.2287539

Terzi M, Jasprica N, Čarni A, Matevski V, Bergmeier E, Theurillat JP (2024) Nomenclature of the Balkan alliance *Romuleion graecae* (*Poetea bulbosae*). Acta Botanica Croatica 83: 87–91. https://doi.org/10.37427/botcro-2024-020

Thompson JD, Fauché M, Papuga G, Gauthier P (2025) Plant conservation in a changing Mediterranean world. Plants, People, Planet 2025: 1–24. https://doi.org/10.1002/ppp3.70036

Tichý L (2002) JUICE, software for vegetation classification. Journal of Vegetation Science 13: 451–453. https://doi.org/10.1111/j.1654-1103.2002.tb02069.x

Tsiripidis I, Bergmeier E, Fotiadis G, Dimopoulos P (2009) A new algorithm for the determination of differential taxa. Journal of Vegetation Science 20: 233–240. https://doi.org/10.1111/j.1654-1103.2009.05273.x

Tsiripidis I, Xystrakis F, Mastrogianni A, Antoniadou Ch, Zervas D, Fotiadis G, Paragamian K, Dimopoulos P, Bergmeier E (2025) Interpretation Manual of Habitat Types in Greece. Environment and Climate Change Agency (O.FY.PE.K.A.), Thessaloniki, GR, 545 pp. [in Greek]

Willner W, Grabherr G [Eds] (2007) Die Wälder und Gebüsche Österreichs. Ein Bestimmungswerk mit Tabellen. – Textband. Spektrum Akademischer Verlag, Heidelberg, DE, 302 pp.

E-mail and ORCID

Erwin Bergmeier (Corresponding author, erwin.bergmeier@bio.uni-goettingen.de), ORCID: https://orcid.org/0000-0002-6118-4611

Supplementary material

Supplementary material 1
Unabridged synoptic table of woods, scrub and phrygana on the island of Lemnos. (*.pdf)
Link: https://doi.org/10.3897/VCS.171362.suppl1

Supplementary material 2
Unabridged synoptic table of dry grassland and rocky vegetation of Lemnos. (*.pdf)
Link: https://doi.org/10.3897/VCS.171362.suppl2

Supplementary material 3
Unabridged synoptic table of coastal, saltmarsh and wetland habitats on the island of Lemnos. (*.pdf)
Link: https://doi.org/10.3897/VCS.171362.suppl3

Supplementary material 4
Unabridged synoptic table of synanthropic vegetation on the island of Lemnos. (*.pdf)
Link: https://doi.org/10.3897/VCS.171362.suppl4

Supplementary material 5
Relevés of woods, scrub and phrygana on the island of Lemnos. (*.pdf)
Link: https://doi.org/10.3897/VCS.171362.suppl5

Supplementary material 6
Relevés of woods, scrub and phrygana on the island of Lemnos. (*.pdf)
Link: https://doi.org/10.3897/VCS.171362.suppl6

Supplementary material 7
Relevés of coastal, saltmarsh and wetland habitats on the island of Lemnos. (*.pdf)
Link: https://doi.org/10.3897/VCS.171362.suppl7

Supplementary material 8
Relevés of synanthropic vegetation on the island of Lemnos. (*.pdf)
Link: https://doi.org/10.3897/VCS.171362.suppl8

Supplementary material 9
Syntaxonomic comments on deviations from the EuroVegChecklist (Mucina et al. 2016). (*.pdf)
Link: https://doi.org/10.3897/VCS.171362.suppl9

Supplementary material 10
Syntaxonomic annotations to the plant communities of Lemnos. (*.pdf)
Link: https://doi.org/10.3897/VCS.171362.suppl10